THE LANGUAGE OF SCHOOLING

A Functional Linguistics Perspective
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This book explores the linguistic features of the language students need to learn for success at school. The variety of English expected at school differs from the interactional language that students draw on for social purposes outside of school, and this book relates the grammatical and discourse features of the language expected in school tasks to the content areas, role relationships, and purposes and expectations that they realize in schooling contexts. A functional grammatical analysis reveals the challenges that the “language of schooling” (Schleppegrell, 2001) presents to students unfamiliar with this variety, including nonnative speakers of English, speakers of nonstandard dialects, and other students with little exposure to academic contexts outside of school. Children encounter the language of schooling even in the early years of formal education, and this book demonstrates how the features of this language are functional for construing knowledge in various school subjects in the later years.

The book builds on frequently cited sociolinguistic, applied linguistic, and discourse-analytic studies of language in school, but interprets these from a functional linguistics perspective, describing the linguistic demands of schooling in ways that illuminate how particular grammatical choices make meanings in the texts students are asked to read and write at school. Functional grammar is different from traditional school grammar in focusing on language as a meaning-making resource rather than as a set of rules, and in recognizing the link between the linguistic choices of speakers and writers and the contexts those linguistic choices help realize.

This book is intended for use in teacher education, especially for teachers of middle, secondary, and postsecondary students and teachers of composition, as well as by researchers in language development and education and scholars with a
general interest in language issues in education. It provides support for researchers and teachers to give more explicit attention to how different grammatical and discourse organizational choices result in different kinds of texts that are valued in different ways. A better understanding of the linguistic challenges of schooling can help us develop more productive strategies for working with students and open up new avenues of fruitful collaboration between linguists and educators. We can also become more conscious of the real content of schooling and the school’s expectations regarding what children should be able to do with language. This can move us toward a classroom environment that builds on the strengths children bring to school and assists them in gaining control of the linguistic resources that are powerful for maintaining or challenging the current social and educational order. In addition, understanding how language structures knowledge in school contexts can give us a better understanding of the nature of language itself.

Thirty years ago, Hymes (1972) proposed an agenda for classroom-based research on language that stimulated a generation of fruitful inquiry. In introducing a book that focused attention on the social and cultural aspects of language use, he reacted to a linguistics that at that time generally ignored context in the study of language. He urged researchers to focus on situated meanings from the point of view of the participants, taking into account the contexts in which speech events occur. Many ground-breaking ethnographic studies followed this call for a classroom-based research agenda on language, describing the kinds of tasks, participation structures, and speech and literacy events that make up the typical school experience (for overviews see Cazden, 1986, 1988).

At the same time that Hymes urged this agenda for classroom research, he pointed out that eventually it would be necessary to go beyond separate analyses of linguistic structure and social context to develop a model that incorporates both. In his words, “... an adequate theory of the functioning of language would not 'start' from either language or context, but would systematically relate the two within a single model” (Hymes, 1972, p. xix). With the publication of Halliday’s functional grammar (Halliday, 1985, 1994), a theory of linguistic structure that does just this became available to researchers, making possible the study of the principled relationship between context and language structure. This book draws on the findings of many important studies done within that framework.

Studies of language in social context that use discourse analysis, variation analysis, or ethnographic approaches, typically do not draw on linguistic theories to inform their focus on linguistic constructs. As a theory of grammar, Halliday’s functional linguistics offers a way of thinking about the relationship between the linguistic choices of speakers and writers in particular moments of interaction and the social contexts that the language helps realize. Of course context is realized in more than language; multiple semiotic systems are always at play in any social interaction. But language itself is a semiotic system of great importance,
and a common framework for analyzing grammar can be a powerful tool to enrich studies from different methodological perspectives.

OVERVIEW

Chapter 1 reviews research that has characterized “literate” language as explicit, decontextualized, complex, and cognitively demanding. Thinking about the challenges students face in using language at school in terms of these constructs conceives of the challenges of advanced literacy in ways that privilege cognitive factors and downplay the social and cultural factors that contribute to students’ ability to use academic language. This discussion sets the stage for analyzing language in the functional ways that are developed in later chapters.

Chapter 2 shows how the school context differs from the home context of language use for many children and describes the ways in which socialization processes prepare some children, but not others, for the linguistic challenges of schooling. Using the examples of sharing time, definitions, and other school-based tasks, it shows how the school, even in the earliest years, has expectations for language use which are seldom made explicit but upon which much depends in terms of assessment of students’ abilities and their opportunities for learning. The chapter introduces an approach to thinking about the language of schooling based on the work of Vygotsky and Halliday.

Chapter 3 presents a functional linguistic analysis of the language of schooling, reinterpreting the features described by the studies reviewed in chapters 1 and 2 to show how those features are functional for constructing the kinds of texts students are expected to read and write at school. It develops the notion of linguistic register and compares the linguistic features of school-based texts with typical features of the registers of informal interaction to show how different registers realize different social contexts.

Chapter 4 shows how the framework developed in chapter 3 can be applied to particular school-based writing tasks. It describes how the grammatical features students draw on evolve as their writing develops into the more highly structured, dense, and authoritative texts expected in advanced literacy tasks. Chapter 4 also describes features of some common genres of schooling and applies the grammatical analysis developed in chapter 3 to the expository essay, a genre that is commonly used as an evaluation device for assessing and promoting students.

Chapter 5 reviews some subject-specific literacy demands of history and science and shows how grammatical choices are functional for construing the technicality and theorizing of science and the interpretation of history. It shows how features of academic registers are functional for realizing the purposes of these and other disciplines, at the same time they challenge students unfamiliar with these
ways of making meaning as they obscure agency and pack information into densely structured texts.

Chapter 6 then draws the implications of the functional analysis for pedagogical practice and future research. It identifies some problems with current approaches to language development at school and argues for a visible pedagogy that helps students analyze language and come to a better understanding of the ways that knowledge is constructed and presented through language.

This book is distinctive in its grounding in a theory that links text and context and highlights the functions of the grammar as a meaning-making resource. It develops a systematic description of the grammar and discourse features of the language typical of school contexts, with a focus on the increasing linguistic demands of the contexts of advanced literacy (middle school through tertiary education). It simultaneously considers issues for second language learners, speakers of nonstandard dialects, and other students who do not have access to opportunities for advanced literacy development in informal contexts outside of school, and argues for more explicit focus on language in teaching all subjects, with a particular emphasis on what is needed for the development of critical literacy.

Inspiration for this work has come most obviously from Michael Halliday, whose creative conceptualization of language as a resource for meaning-making underlies all of the analyses here. The work of J. R. Martin and Frances Christie in developing this theory for educational contexts has also been a major influence. Many people provided comments and feedback that helped shape this book along the way. I am especially grateful to Frances Christie for constructive comments on an earlier version. I make no claim that she would fully endorse the interpretations put forward here. The ideas developed in this book have also been shaped through ongoing discussion of functional grammar and advanced literacy issues with M. Cecilia Colombi, whose collaboration I have greatly appreciated. Many thanks to John T. Rowntree, who was engaged in the project throughout, for valuable editorial comments and suggestions, as well as to Robert Bayley, James Gee, Bernard Mohan, and anonymous reviewers. Special thanks also go to Mariana Achugar, Luciana Carvalho de Oliveira, and Ann Go, for their careful review and extensive comments on earlier versions, as well as to Vaidehi Ramanathan for her ongoing support and encouragement. Others who have provided valuable input and feedback include Laura Dubcovsky, Jan Frodesen, and Teresa Oteíza, along with the many students who have grappled with these concepts and raised important questions. My thanks also to Naomi Silverman and the editorial team at Lawrence Erlbaum Associates for their support and assistance.

—Mary J. Schleppegrell
1

Characterizing the Language of Schooling

[Language is the essential condition of knowing, the process by which experience becomes knowledge.]
—Halliday (1993g, p. 94)

How do we come to know something? In particular, how do we come to the abstract kinds of knowledge that schooling aims to develop? As the opening quote from M. A. K. Halliday suggests, this book takes a linguistic perspective on this question. It offers a way of seeing how meaning and form are related in the different options available in the grammatical systems of the English language, and how knowledge is construed in the language of schooling. Grammatical choices realize meanings of different kinds. This book explores the meanings typical of the texts students are asked to read and write at school. It identifies linguistic features common to school-based tasks and demonstrates how those features enable the construal of increasingly specialized knowledge as students progress through school. Learning therefore involves linguistic challenges that increase as students move from primary to secondary schooling and on to higher education.

Developing the kind of knowledge that comes through schooling requires that students learn to use language in new ways. Even brief observation of any classroom shows the role that language plays in both managing activity and presenting academic content. It is through language that school subjects are taught and through language that students’ understanding of concepts is displayed and evaluated in school contexts. In addition, knowledge about language itself is part of the content of schooling, as children are asked to adopt the word-, sentence-, and rhetorical-level conventions of writing, to define words, and in other ways to focus on language as language. In other words, the content, as well as the medium,
of schooling is, to a large extent, language. Schooling is primarily a linguistic process, and language serves as an often unconscious means of evaluating and differentiating students.

Inasmuch as content and disciplinary knowledge are constituted and presented through language, learning an academic subject means reading and writing texts that are organized linguistically to accomplish particular communicative purposes. In school, students are expected to use language to demonstrate what they have learned and what they think in ways that can be shared, evaluated, and further challenged or supported. The texts they read and write present knowledge in ways that are different from the interactional co-construction of meaning in more informal situations. So the patterns of language chosen by students to express and share their understanding are of major importance in presenting themselves as knowers and sharers of knowledge. But language patterns themselves are rarely the focus of attention of students and teachers. Their attention is typically on the content of the texts they read and respond to but not on the ways language construes that content. In addition, teachers’ expectations for language use are seldom made explicit, and much of what is expected regarding language use in school tasks remains couched in teachers’ vague admonitions to “use your own words” or to “be clear.” Writing tasks are assigned without clear guidelines for students about how a particular text type is typically structured and organized. For these reasons Christie (1985) has called language the “hidden curriculum” of schooling.

By exploring the features of this “hidden curriculum,” we can reveal the patterns of language use that present challenges to students. Students’ difficulties in “reasoning,” for example, may be due to their lack of familiarity with the linguistic properties of the language through which the reasoning is expected to be presented, rather than to the inherent difficulty of the cognitive processes involved (Clark, 1977; Christie, 1999b). When students use linguistic styles typical of ordinary conversational interaction to present information or make an argument in schooling contexts, they may be judged illogical or disorganized in their thinking. Students who do not use language in the ways expected at school may even be thought to have learning difficulties, especially if their spoken English is fluent, as is often the case with speakers of nonstandard dialects or immigrant students who have been in the United States for many years. Judgments about students’ abilities are often based on how they express their knowledge in language. The testing, counseling, and classroom interactions that inform these judgments perpetuate and maintain values that are often not made explicit. This suggests that a careful analysis of the linguistic challenges of learning is important for understanding the difficulties students face and the limitations they demonstrate in talking and writing about topics they have studied.

By investigating how the knowledge and social practices that constitute schooling are construed in great part through language, we gain insights into the ways that different linguistic choices are functional for creating different types of
texts. This helps us better understand the power of language in the development of what students learn. “Learning language” and “learning through language” are simultaneous (Halliday, 1993g). By recognizing the ways that language construes different kinds of meanings, we see how the sociocultural knowledge needed for success at school includes learning the ways of using language that enable students to develop and display new knowledge. With a functional linguistic perspective, we have a means of focusing on the forms through which knowledge is construed. This can inform pedagogical practice and enable teachers to make explicit the ways that meanings are made through language. Teachers need greater knowledge about the linguistic basis of what they are teaching and tools for helping students achieve greater facility with the ways language is used in creating the kinds of texts that construe specialized knowledge at school.

**THE LINGUISTIC CONTEXT OF SCHOOLING**

For many children, schooling presents a new situation, new ways of interacting, and new types of texts, as they are expected to read and write genres that construe new kinds of disciplinary knowledge. As they write, the lexical and grammatical choices they make, clause by clause, simultaneously construe social relationships and experience of the world. This book presents a functional linguistic analysis that demonstrates how each clause presents experience and enacts a social relationship, at the same time that it links with a previous clause and builds up information that is then carried forward in subsequent clauses. Although these three processes always occur together in any use of language, the way they occur differs according to the context.

Many teachers are unprepared to make the linguistic expectations of schooling explicit to students. Schools need to be able to raise students’ consciousness about the power of different linguistic choices in construing different kinds of meanings and realizing different social contexts. In order for this to happen, researchers and teacher educators need a more complete understanding of the linguistic challenges of schooling. In the absence of an explicit focus on language, students from certain social class backgrounds continue to be privileged and others to be disadvantaged in learning, assessment, and promotion, perpetuating the obvious inequalities that exist today.

The school plays a major role in shaping students’ lives and preparing them to play particular roles in society. Schools value those ways of using language that are characteristic of the professional, technical, and bureaucratic institutions of our society, and in valuing those resources and forms, also typically de-value other forms and resources. Assessment of students’ intelligence and scholastic achievement is accomplished in the interactions between teachers and students, and testers and students (Mehan, 1978), and such interactions often rely on judgments about students’ linguistic skills. The linguistic basis of these judgments,
however, is seldom made explicit. By analyzing the kinds of grammatical choices that help students successfully accomplish assigned tasks, we can reveal the overt and covert expectations that guide the assessment and evaluation of students’ school performance and identify the choices that are highly valued in academic language tasks.

Language use is always socially and culturally situated. What we learn and how we learn it depends on the contexts in which we learn. Not all students come to school with the same background and ways of using language. School language tasks are not familiar to all students from their experiences in their homes and communities. For some children, the socialization contexts in which they have participated have prepared them well for the ways of using language they encounter at school. For many other children, however, this is not the case. That is why the concerns addressed in this book are important. By focusing on language as a means of understanding content, pedagogical practice can respect the language students bring to the classroom at the same time they are offered tools for developing new linguistic resources.

As students move from the early primary years into late primary school, middle school, and high school, and then into college or university, they need to engage in increasingly advanced literacy tasks in which language is typically structured in ways which condense information through lexical choices and clause structures that are different from the way language is typically used in ordinary contexts of everyday interaction. This book demonstrates how the contexts of schooling are construed through particular kinds of grammatical and lexical choices that make the kinds of meanings that are expected at school. It identifies the features that school language draws on and shows why those features are functional for learning and displaying knowledge. It suggests that the features be brought to the attention of students in ways that help them understand the functionality of particular linguistic choices for creating the texts they read and write at school.

Of course, problems of student learning have multiple causes that go far beyond linguistic issues. But analysis of the language used to teach and learn school subjects can illuminate some of the difficulties students experience in achieving school success. Exploring the features of language used in schooling highlights the relationship between language and learning in ways that reveal the close connection between language and content in all school subjects. Knowing how knowledge is construed in language can make the relationship between language and learning a focus of attention in schools and help teachers change the success patterns of students who currently do not succeed. At the same time, making explicit the way the curriculum is construed in language can also open up the curriculum to challenge or change by those who recognize its limitations or constraints.

This book provides a linguistic description of the language of schooling, focusing in particular on the challenges of advanced literacy: reading and writing the
kinds of texts relevant to middle school, secondary school, and higher education contexts. The illustrative examples used throughout the book come from a variety of studies and draw on interviews with students, textbook passages from different subject areas and grade levels, and texts written by middle school, high school, and university students, including both native and nonnative speakers of English. The context of production for all of this language is the school and classroom, where finding examples to support the linguistic arguments being made here is relatively straightforward. The language expected and required in school settings has similar grammatical features, so exemplars of such language are ubiquitous in the school context. Describing the language that realizes “schooling” broadly enough to capture its essential qualities requires abstraction from actual language data in the same sense that we have to abstract from actual language data to describe “English” or “Chinese.” Although any particular example may not demonstrate every feature of the school-based registers being described here, each example, as a particular instance that construes the context of schooling, has a constellation of features that situates it as an instantiation of the system as a whole.

“School” is also presented here as a unitary construct, in spite of the fact that each classroom and each school has its own subculture and its own ways of using language for learning. But school can also be conceptualized broadly as the institutional framework in which children are socialized into ways of formal learning in our society, and it is this understanding of school that informs the discussion here. In the context of schooling in systems that have evolved from western European traditions, students are expected to present their developing knowledge in particular ways through language. It is those expectations that are the subject of this book.

THE CHALLENGES OF “LITERATE” LANGUAGE

In today’s complex world, literacy means far more than learning to read and write in order to accomplish particular discrete tasks. Instead, literacy is a form of social action where language and context co-participate in making meaning (Halliday, 1978; Lemke, 1989). Although much research has focused on the features of early reading and writing in school contexts, less work has been done related to the kinds of tasks that challenge students in middle school, high school, and post-secondary education. These advanced literacy contexts (Schleppegrell & Colombi, 2002) call for a kind of meaning-making that is also required for participation in many of the institutions of today’s world. An individual’s growth and development and ability to participate in society require ever-expanding knowledge and control over meaning-making in new contexts and through new linguistic resources. Students need to use language in particular ways in order to be successful in science, history, and other subjects; to develop interpretations, construct arguments, and critique theories.
Learning to use language in ways that meet the school’s expectations for advanced literacy tasks is a challenge for all students, but it is especially difficult for those who have little opportunity for exposure to and use of such language outside of school. Our schools serve students who speak different languages and dialects, who have been socialized in different ways, and who face different kinds of challenges in their daily lives. Students whose cultural practices are similar to those of the school may be able to transfer those practices to the school setting, but students from other backgrounds may need to focus on the ways that language contributes to meaning-making as they engage in new social and cultural practices in order to succeed in achieving advanced literacy.

The functional linguistics approach that this book takes focuses on the ways that social contexts are always realized in the linguistic choices speakers and writers make in constructing texts of different types. It is the social contexts that need to remain at the forefront of our thinking about the linguistic challenges of schooling so that our approach to research and pedagogy can reveal the true expectations that the tasks of advanced schooling present to the diverse students in today’s schools.

Much research on students’ language development and much analysis of school-based language focus on the differences between speech and writing, describing the challenges that come with the need to deal in a written mode at school. From this perspective, “literate” texts have been described as decontextualized, explicit, and complex (Gumperz, Kaltman, & O’Connor, 1984; Michaels & Cazden, 1986; Michaels & Collins, 1984; Olson, 1977, 1980; Scollon & Scollon, 1981; Snow, 1983; Torrance & Olson, 1984). These features, in this view, make this language more cognitively demanding than the language of spoken interaction.

Decontextualization, explicitness, and complexity are inadequate characterizations of the real challenges of the language through which schooling is realized, however. Such characterizations of “literate” language are motivated by the linguistic features of this language, but these terms carry values that can distract us from attending to the social contexts of language use and the ways those contexts are realized in particular grammatical and lexical choices.

School-based texts accomplish particular purposes in schooling by construing the kinds of experience and interpersonal relationships that are expected in the schooling context, which itself has particular cultural purposes. By recognizing how different linguistic choices are functional for construing experience, presenting one’s perspective, and constructing particular kinds of texts, we keep the focus on the role of language as a social force. This perspective expands the teaching arena, enabling the teacher to be proactive in new ways in helping students learn the ways language is used to construe knowledge in different subject areas.

Because all language use contributes to the construal of the social contexts in which it occurs, a functional theory of language enables us to identify the linguistic choices that realize particular kinds of contexts. The notion of linguistic
“choice” is a key feature of the analysis presented here. Rather than seeing language as a set of rules, the functional linguistic perspective sees the language system as a set of options available for construing different kinds of meanings. Although the language as a whole offers a broad set of options, each speaker may be aware of only some part of the total set, based on that speaker’s experiences. Unfamiliarity and lack of social experience with the way language is used in school, rather than the intrinsic cognitive challenges of the content or subject matter, may underlie the difficulties many students experience in schooling. Recognizing the socially constructed nature of the language of schooling also enables us to see that it can be taught and learned. The next sections of this chapter discuss the inadequacy of thinking about the linguistic challenges of schooling in terms of the decontextualization, explicitness, and complexity of the language itself. An alternative functional linguistic perspective is then introduced to highlight the social and cultural dimensions of the linguistic challenges.

Decontextualization

The view of school language as “decontextualized” has its origins in work such as Olson’s (1977) distinction between text and utterance. In that influential and frequently cited article, Olson (1977) argues that “. . . language development is not simply a matter of progressively elaborating the oral mother tongue . . .” (p. 275). Instead, he suggests, a whole new way of using language emerged in the western essayist tradition, leading to the development of what he calls “text”; more conventionalized and explicit than the “utterance” of oral language. As this essayist tradition developed historically, according to Olson, the focus of the author has been to try to put the total meaning into the text; that is, to fully conventionalize meaning, minimizing dependence on the situated knowledge that we use in understanding ordinary conversation by drawing on linguistic conventions that are designed to make texts more explicit. This enables written texts to be understood, according to Olson (1977), on their own terms, without recourse to context and speaker presuppositions. In writing, as different from in speaking, “the meaning is in the text” (p. 278). Spoken language, on the other hand, appeals to shared experiences and knowledge for interpretation. Olson suggests that formal schooling is a process of teaching children to “speak a written language,” and that the transition from oral language to written text is “one of increasing explicitness, with language increasingly able to stand as an unambiguous or autonomous representation of meaning” (p. 258).

Olson’s arguments have been extensively critiqued (see, e.g., Geisler, 1990; Nystrand & Wiemelt, 1991; Street, 1984). Although Olson himself has somewhat modified the strong position he put forth in 1977 (see Olson, 1994), the views expressed in that article are still influential. The notion of “autonomous text” has influenced others to consider some uses of language “decontextualized,” with implications for school success. Catherine Snow and her colleagues, who
have also been influential in shaping a view of the relationship between lan-
guage, learning, and home and school experience, provide particularly clear
statements of these issues in relation to pedagogical concerns.

For Snow (1983), decontextualized language is language used “without the
support of conversational context” (p. 186). Examples of such language use in-
clude presenting monologues, doing abstract verbal reasoning, and giving
metalinguistic judgments such as judging sentences as grammatical or ungram-
matical, identifying ambiguity, and giving definitions. These tasks require skills
in providing a “coherent, comprehensible, informationally adequate account
without signals from an interlocutor” (Snow, 1987, p. 4). She focuses particularly
on the distanced relationship between reader and writer. Table 1.1 summarizes
the key features of what Snow calls decontextualized language. Snow character-
izes “decontextualized” language as explicit, distanced, and complex and highly struc-
tured. By explicit, she means that the vocabulary choices are precise and elabo-
rated. Distanced refers to the relationship between speaker/writer and listener/
reader. In decontextualized language, the student has to make the message clear
without the help of an interlocutor, and the speaker/writer’s view of the listener/
reader’s perspective and participation in the text is reflected in the way reference
is made to what is being talked about. The deictic1 this or that, for example, that
refer to something that can be pointed to in a shared context, cannot be used as a
resource for making meanings clear in decontextualized texts. Such texts are also
complex and highly structured, with lexical and syntactic means used to show
how one part of a text relates to what has been said before.

The features of decontextualized language that Snow points to are stated in
linguistic terms, especially in terms of linguistic choices that need to be made for
reference and linking. In her study of how children in middle-class homes are
prepared for the literacy demands of schooling, Snow (1983) shows that some
caregivers use these “literate” features even in their oral discourse with children.
Snow suggests that such language does not draw on the shared physical context
and is not molded in response to a present interlocutor, as ordinary spoken inter-
action typically does and is.

The functional view taken in this book also recognizes that written language
has developed over time in ways that are quite different from the ways that oral
language has developed. However, the interpretation of these differences fo-
cuses on how the written ways of meaning are functional for doing the kinds of
things with language that are typical of contexts like schooling. Rather than
talk about such language as decontextualized and explicit, the functional focus re-
veals the kinds of contexts that written, school-based texts realize.

1Deictic (from the Greek word for “pointing”) refers to words which can be interpreted only with
reference to the speaker’s position in space or time. In English, these include I, you, here, there, this,
that, now, then, etc.
TABLE 1.1
Features of Snow’s “Decontextualized Language”

<table>
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<tr>
<th>Feature</th>
<th>Characterization of the Feature</th>
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<tr>
<td>Explicit Distanced</td>
<td>Precise lexical reference; more elaborate lexis. Fictionalized author, distant setting. Audience can provide no interactive help with clarification of the message or signals that it is being successfully formulated. Deictic contrasts must be understood from the speaker’s or writer’s point of view. No assumption of shared background knowledge with the audience.</td>
</tr>
<tr>
<td>Complex and Highly Structured</td>
<td>Complex syntactic structure, highly cohesive and coherent. Elaborate exploitation of lexical and syntactic resources to express more complex message structure and to integrate and explicate relations among bits of information.</td>
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It is important to make this distinction because of the judgments that follow from characterizing the task and challenges in different ways. Characterizing texts as “autonomous” suggests that students who are able to effectively read and write school-based texts have the ability to distance themselves from the present context and deal with decontextualized knowledge. This seems like a very advanced skill, indeed, and it is not surprising that this ability would be valued. But if, on the other hand, it is recognized that contexts are in fact evoked in the language choices made in constructing every text, then the role of social experience in preparing a student to use language in ways expected in school tasks can be explicitly acknowledged and incorporated into language development theory and pedagogy. To call the kind of texts that students need to work with at school decontextualized suggests that these texts are somehow outside of any particular context. But school-based texts are difficult for many students precisely because they emerge from discourse contexts that require different ways of using language than students experience outside of school. Reading, writing, and speaking the kinds of texts that are valued in school calls for drawing on a different constellation of linguistic resources from what is typical or expected in everyday conversation.

Informal spoken interaction has key features such as deictic pronouns and demonstratives that reflect the context of situation in which the speakers find themselves. But written texts also reflect the contexts from which writers proceed, requiring different kinds of contextualizing features for understanding. The point is not that written language is decontextualized, but that it typically draws on different lexical and grammatical resources and genre conventions than informal spoken interaction because it generally realizes different situational contexts. It is familiarity with the expectations of the situation and with the kinds of grammatical choices that construe particular contexts that enables a speaker/writer to produce a text that has the “written” features.
Olson and Snow both suggest that decontextualized language creates autonomous texts that can be understood out of the contexts of their creation. The research and pedagogical implications of this way of thinking about language would seem to be that students need to learn to be more explicit, distanced, and complex in their language use as their writing develops. But examination of constructs like “explicitness” and “complexity” suggests that they can be misleading in the way they lead us to think about the cognitive demands of schooling. And characterizing any language use as decontextualized distracts us from a focus on the actual linguistic features that construe different contexts. The alternative view developed in this book is that a more appropriate and effective way to focus on language development is to help students understand the contexts that the texts of advanced literacy emerge from and how the linguistic choices of writers construe particular kinds of meanings.

**Explicitness**

Studies that characterize academic language as *explicit* typically focus on linguistic features such as the use of full noun phrases instead of pronouns, avoidance of deictic expressions that require situational context for understanding, and use of markers of organizational structure as evidence for greater explicitness. Teachers promote this type of explicitness when they push students to lexicalize referents that might otherwise be expressed as deictics, pronouns, or gestures, and to expand ellipsis, as seen in (1):

(1) K: They were hunting for—
T: Ok, they were hunting for—
Ss: Wari [type of animal in the story]
T: Hold on. Who was hunting?
K: Three brothers.
T: Ok, three brothers were . . . hunting.

(Solomon & Rhodes, 1995, p. 6)

This fifth-grade teacher is unwilling to accept a summary of a story which specifies referents pronominally instead of lexically, even when all students share knowledge of this story and the characters.

Studies of child language have shown that children follow a developmental path in their ability to be explicit in these terms, and that their social and cultural experiences prepare them to do this in particular contexts and not others. Through social experiences they learn when and how to provide a context for their interlocutor that does not rely on a shared situation (Bernstein, 1972). Romaine’s (1984) study of children’s language development, for example, focusing on devices for topic specification and elaboration such as modifiers, prepositional phrases, and relative clauses, finds great variability in the extent to which chil-
dren provide elaborated referents, depending on the situation. The same children who have trouble specifying and elaborating a topic in some contexts are able to do so when they understand that the speech situation calls for such specification and elaboration. Romaine points out that all children are familiar with the syntactic constructions needed to make a text lexically explicit. How children differ is in knowing what is assumed and what must be made explicit in a particular situation. Because this is a function of the purpose and role of the text that is being created and of the degree of shared knowledge that can be assumed at a given moment, a child’s tendency to be “explicit” reflects that child’s familiarity with the expectations of a particular discourse situation.

Explicitness is always relative, since presuppositions and background knowledge are called on in the interpretation of all texts. Lexicalization in itself does not necessarily make a text more unambiguous. Informal spoken texts typically use exophoric referents, pronouns, and generalized conjunctions, but the meanings constructed in such interaction are usually clear to the interlocutors, even with disfluencies, false starts, and elliptical structures. The broader illocutionary force of an utterance, combined with the shared context, even make it possible for interlocutors to comprehend and move forward in a conversation when someone mis-speaks. In any case, lexicalization is not the same thing as the clarity of meaning that is suggested by the term explicit. Nystrand and Wiemelt (1991) point out that explicit is typically used to mean that there is no doubt about possible meaning. They suggest that explicitness in these terms is valued because it is said to reflect the full and careful articulation of thought. Learning to be explicit, from this perspective, means learning to think carefully. But as they point out, formal explicitness, in the sense of lexicalization, may not imply clarity of meaning. Whether a referent is explicit or not in academic texts depends on the presuppositions of the writer/speaker and the background knowledge of the reader/listener, just as in conversational texts, the explicitness of referents depends on shared situational context and background knowledge. Explicitness emerges from a match between the context in which a text is used and the reader’s purposes, situations, and cultures (Nystrand & Wiemelt, 1991).

In fact, inferencing on the basis of background assumptions plays a central role in the interpretation of all texts. Highly complex and abstract background assumptions which are not spelled out are often necessary for the interpretation of written language, especially in school contexts (Sinclair, 1993). Sinclair argues that it is not possible to make written language fully explicit, because contextual assumptions are always important to interpretation. If students lack the necessary background assumptions, they will fail to comprehend even the most lexically explicit texts. As is demonstrated in later chapters, the technicality and abstraction that are functional and necessary for engaging in advanced literacy tasks in school subjects often obscure agency (who is responsible), making the texts inexplicit in order to give priority to the processes rather than participants. Explicit-
ness, then, is achieved in context-appropriate text. It does not necessarily mean the text is unambiguous. This is why *explicit* may be a misleading characterization of written texts and school-based language.

No language that participates in social processes is decontextualized. To say that school-based language is decontextualized ignores the fact that the classroom is its own context with its own expectations for language use, and that this context is more familiar to children of some backgrounds than to others. The background knowledge and expectations of participants in school-based genres are situated in particular sociocultural contexts which are defined by larger class relations and other power structures of society. There is no doubt that much of what is taught in school is different from how things are typically learned in ordinary life. For example, learning vocabulary words and their meanings before reading a passage, or in a spelling list, is quite different from learning new words incidentally in contexts where they are functional. But using the term *decontextualized* in reference to texts of language itself misleadingly presents some texts as being fully comprehensible in and of themselves. Notions of *explicitness* and *decontextualization* ignore the cultural knowledge and knowledge about language use needed to make the link between text and context. All texts reflect the contexts of their creation, but not all students are familiar with the contexts that are evoked. To call language decontextualized when referents are lexicalized fails to recognize that to lexicalize known referents is also a convention that evokes a particular context. Making the linguistic choices that realize academic contexts requires experience and willingness to participate in such contexts along with knowledge of the grammatical and lexical choices that are highly valued.

Language is always used in particular cultural ways that are learned through experience. From a functional point of view, then, the language of schooling is not decontextualized, just unfamiliar to many students (Sinclair, 1993). It is the knowledge and experience of the listener or reader, and not the language itself, that determines whether or not a particular text is contextualized. Arguing that texts are autonomous underestimates the challenges for those who do not have an insider’s understanding of the conventions for the creation of academic texts (Geisler, 1990). So instead of characterizing the language of schooling as explicit and decontextualized, we need to recognize what the linguistic features are that lead to such characterizations and understand how these features are functional for making school-based texts effective in and for their contexts.

Snow and Olson both recognize the role of context and experience, although they do not highlight these aspects. Olson (1977), for example, recognizes that students’ difficulties in interpreting sentence meaning in “decontextualized” ways may indicate lack of experience in suspending prior knowledge and expectations. Snow (1983) also recognizes that context includes historical context—that is, that previous experience contextualizes tasks for students familiar with such tasks. The functional linguistics approach foregrounds the relationship be-
between context and language by focusing on the ways this relationship is realized in different kinds of spoken and written texts. Students’ learning and language development can be analyzed in terms of the kinds of contexts their linguistic choices realize as they engage with the spoken and written tasks of schooling.

**Complexity**

The written language typical of schooling is also described as more “complex” than the language of ordinary spoken interaction. Here again, however, a functional linguistic perspective can enrich and nuance our understanding of a construct like complexity. Halliday (1987, 1989) argues that speech and writing have different kinds of complexity, manifested in different but functional ways in each case in the creation of different kinds of texts. Spoken language is complex in its introduction and elaboration of background as it is needed, in its linking of various structures into a coherent text by use of conjunctions and discourse markers, and in its use of intonation to mark information structure. In academic texts we find a different kind of complexity, with elaboration through nominal elements expanded with pre- and postmodification by adjectives, prepositional phrases, and embedded clauses. Participles, adverbial phrases, and other devices allow for expansion of clause-internal structure at the same time that infinitive clauses, *that* clauses, restrictive relative clauses, and other such structures allow for the embedding and integration of ideas in complex clauses (Chafe, 1985).

Written, school-based texts tend to be complex in their internal clause structure, while spoken interaction tends to be complex in the way clauses are chained and linkages are indicated from one part of a larger discourse to another. To call only the organization of written text “complex” privileges one kind of complexity. Assessing students’ language by calling only certain grammatical choices complex gives them value that is often interpreted cognitively in ways that are inappropriate. Some forms of complexity are part of conversational competence, too, and grammatical analysis needs to take account of these different kinds of complexity, recognizing that spoken and written modes typically call for different kinds of linguistic structuring without a bias or privileging of one mode by calling it more complex.

A functional linguistic analysis shows, for example, that a construct like *subordination*, frequently used as a measure of language complexity in educational and linguistic research, can actually serve different functional roles and introduce different kinds of complexity into texts. Relative clauses, complement clauses, and adverbial clauses introduced by subordinators such as *because*, *although*, *if*, *before*, *since*, and others are typically considered subordinate clauses, but some “subordinate” clauses play nonsubordinating roles as broader discourse links (see, e.g., Schleppegrell [1991, 1992] for an analysis of *because* clauses in these terms). It has
also been shown that subordinate clauses do not necessarily co-occur with other linguistic elements associated with formal, literate style (Besnier, 1988; Biber, 1986; Finegan & Biber, 1986). Not all subordinate clauses are equally “complex,” and a functional approach can analyze how the different types of clauses called “subordinate” contribute to text structure and complexity in different ways.

Analysis of subordination is often used in studies of spoken and written discourse to draw conclusions about the linguistic skills of a speaker, or about the complexity of the discourse which is analyzed. Beaman (1984), for example, uses subordination as an index of complexity in speech and writing, and Kalmar (1985) uses the development of subordination as an indication of a higher evolutionary level of a language. In several studies during the 1960s and later, researchers showed a correlation of use of subordinate structures with school success. Loban (1963) states the underlying assumption of this approach when he says “both logical analysis and previous studies of language designate subordination as a more mature and difficult form of language expression than simple parallel statements connected by and or but” (p. 17).

The equation of subordination with complexity in measurement of language performance, and the further equation of linguistic complexity and cognitive skill, suggest that an accurate definition and analysis of complexity is an important issue for both educational and linguistic research. Subordination is considered a complex use of language because it represents the embedding of one clause within another in a hierarchical relationship (Quirk, Greenbaum, Leech, & Svartvik, 1972). Romaine (1984) points out that “children’s language development has often been assessed in terms of measures which rely on the assumption that having strategies for subordinating and embedding sentences within each other is indicative of greater cognitive skill and verbal ability” (p. 145). She questions this assumption, as her research shows that certain constructions may be acquired and used only in certain contexts, such as school, and suggests that studies of syntactic structure must focus on the pragmatic and semantic, as well as the syntactic, aspects of these constructions. Her view is that all children have competence in using complex syntax, but that situationally such use may be differentially displayed, due to different experiences in use of language and expectations about the context in which the language is elicited.

Studies that measure language complexity have an impact not only on research but also on the practice of education. Loban (1986), for example, makes curricular recommendations, stressing the importance of oral language as a basis for literacy, and arguing that students need to develop “syntactic complexity” in speech before writing. Such recommendations are of course crucially dependent on clear definitions of syntactic complexity, and on definition of what counts as complex in speech and writing. Both spoken and written language can be shown to be complex, depending on the variables that are in focus for the analyst. This suggests that the demands of school-based texts are better framed in linguistic terms rather than in the cognitive terms that a word like complexity suggests.
Cognitive Demand

When terms such as decontextualized, explicit, and complex are used to characterize language, these terms are often interpreted cognitively. The characterization of academic language as more cognitively demanding than ordinary conversational interaction is articulated by Cummins (1984), who posits two dimensions on which language tasks can be evaluated: according to the amount of contextual information available to make the language comprehensible, and according to the amount of cognitive involvement needed to do the task. Cummins (1992) defines cognitive demand as the degree to which “linguistic tools have become largely automatized (mastered) and thus require little active cognitive involvement for appropriate performance” (p. 18). He suggests that “cognitive involvement can be conceptualized in terms of the amount of information that must be processed simultaneously or in close succession by the individual in order to carry out the activity” (Cummins, 1984, p. 13).

Others have used the notion of cognitive demand to categorize the level of difficulty presented by teachers’ questions, suggesting that “thinking skills” can be taught by asking students questions that elicit “higher order” thinking (see, e.g., O’Malley & Valdez Pierce, 1996, p. 183, or other work based on Bloom et al., 1956). But it is important to keep in mind that the degree to which a task is cognitively demanding depends on the particular context and on students’ prior familiarity and experience with the topic and task. Categorizing teachers’ questions as being more or less cognitively demanding in terms of the responses they would seem to elicit from students, for example, obscures important differences in how questions are asked and answered that can be determined only by looking at the way the question/answer sequence unfolds during classroom discourse. The level of cognitive demand of a particular question depends on what the teacher’s goals are, what the students have already learned, and the point in the lesson at which the question is asked. A determination of the cognitive level of teacher questions needs to be made by analyzing the interaction which results, not just the form of the elicitation (McCreedy & Simich-Dudgeon, 1990).

Text (2) is an example of this from a sixth-grade science lesson on mealworms. The teacher is asking students questions about what they have learned:

(2) Teacher: Do they have ears?
Student: No.
Teacher: How do you know? How do you know whether they have (any of those) or whether they do not. Karen?
Karen: Well, I know that they have eyes ’cause it was on the chart. And I knew that they didn’t have noses ’cause I looked it up, but I don’t know if they have ears or not.

(McCreedy & Simich-Dudgeon, 1990)
While the teacher’s question, How do you know? would seem to call for some reasoning on the part of the student, in this case the response only reports where the student found the factual information. So rather than presenting “higher cognitive demand,” this question, when analyzed retrospectively to account for the student’s response, is seen to actually involve little cognitive demand at all. The level of cognitive difficulty is negotiated at the level of the interactive task in which the teacher and student(s) are engaged, rather than being determined by the linguistic form of the question itself. As Mehan (1979) said, “the meaning of an act initiated by the teacher . . . is prospective. Its actual meaning is realized retrospectively, when the act performed by the student is evaluated by the teacher” (p. 63).

Just as with the other notions discussed in this chapter, the notion of language as inherently cognitively demanding is problematic. The cognitive demand of any particular activity or text is a product of the students’ prior experience (including experience with language). Therefore, out of context, no particular task can be called cognitively demanding. Language is more cognitively demanding when it is less familiar and automatic, so school-based language use may typically be more cognitively demanding than conversational interaction for the learner who has used English primarily in informal situations. Context-dependence and cognitive demand (Cummins, 1984) may be useful constructs for language teachers to consider in setting appropriate tasks for learners, since providing context for understanding and monitoring the level of information processing required of students should enhance their learning opportunities. But cognitive demand must be seen as residing in the relationship between task and learner rather than in the task or text itself.

**Summary**

Characterizing academic language with notions such as decontextualization, explicitness, complexity, and cognitive demand implies that students’ difficulties with this language are related to their cognitive abilities. This ignores the roles of both social experiences and knowledge about language. To characterize only school language or written discourse as explicit, complex, and cognitively demanding ignores the cultural and experiential roots of knowledge about language use at school, and devalues the explicitness, complexity, and cognitive demand of interactional spoken language. To call any language use decontextualized ignores the context all language realizes. A more nuanced understanding of the role of language in schooling recognizes that students’ difficulties may be related to inexperience with the linguistic demands of the tasks of schooling and unfamiliarity with ways of structuring discourse that are expected in school. Such an understanding may lead to more effective ways of addressing language-related issues in education. The real curriculum demands can be made explicit so that language can be taught in schools in ways that help students understand how they can draw on a broader
range of linguistic choices to make different kinds of meanings in different subject areas.

In order to fairly assess linguistic development and offer instructional interventions that help students develop advanced literacy, educators need to consider the social contexts of language use and students’ differential access to opportunities for development of the language needed in academic tasks (Colombi & Schleppegrell, 2002). Linguistic features which are conventionalized and learned through schooling are part of a cultural and social class heritage which is made available to some speakers as young children and is not accessible to others outside of school. The challenge is to value the language children bring to school from their homes and communities at the same time they are provided with an understanding of how new ways of using language will help them accomplish new kinds of tasks. For schools to be successful, they need an orientation to language that allows all students to continue to develop linguistic resources in classroom contexts. This book offers such an orientation by demonstrating the linguistic challenges of learning in the context of schooling, focusing in particular on the development of advanced literacy in middle school and beyond.

Control of academic language means making the linguistic choices that construe the knowledge and realize the role relationships and types of texts that emerge in the contexts of schooling. This makes the challenges of schooling as much linguistic as cognitive; and in fact, it shows the primacy of the language in students’ presentation of what they have learned. Students need to gain social experience with the ways of using language that are expected at school and a greater understanding of the linguistic resources available to construe new knowledge. A functional theory of language that links language and social context grounds the characterization of the task that students face at school in the challenges of realizing in language the new contexts and knowledge presented in classrooms. Currently, there is little focus on grammar or discourse structure in school or teacher education curricula. Even teachers who would like to draw students’ attention to differences in text types and the linguistic choices that make one text more powerful than another lack tools for incorporating such an emphasis into classroom instruction. This book provides tools for linguistic analysis and for talking about the ways language construes disciplinary content in functional ways.

A FUNCTIONAL THEORY OF LANGUAGE

The theoretical framework that informs this book is systemic functional linguistics (Halliday, 1994; Martin, 1992; Matthiessen, 1995). Halliday (1993g) suggests that language is a “theory of human experience” that children learn as they
enact their culture, and that understanding language better can help us under-
stand how this learning happens. Systemic functional linguistics enables us to see
the ways that language, as a semiotic tool, interacts with social contexts in mak-
ing meaning. It is a theory of language that shows the power of language and the
role it plays in the demands and challenges of schooling.

Systemic functional linguistics highlights the ways linguistic choices con-
tribute to the realization of social contexts. It connects the linguistic and the
social by offering descriptions of language form that show the meanings those
forms realize and by offering descriptions of the meanings construed by lan-
guage in relation to social contexts. It offers, therefore, a theoretically coherent
means of describing how and why language varies in relation both to groups of
users and to uses in social context (Halliday & Hasan, 1989). Systemic func-
tional linguistics uses the notion of linguistic register to illuminate the relation-
ship between language and context. A register is the constellation of lexical
and grammatical features that realizes a particular situational context (Halliday
& Hasan, 1989), so registers vary because what we do through language varies
from context to context. A register emerges from the social context of a text’s
production and at the same time realizes that social context through the text (a
text can be spoken or written). The features of the social context that the gram-
mar helps instantiate include what is talked about (field), the relationship be-
tween speaker/hearer or writer/reader (tenor), and expectations for how particu-
lar text types should be organized (mode) (Halliday, 1994). Speakers and writers
simultaneously present content, negotiate role relationships, and structure texts
through particular grammatical choices which make a text the kind of text it is.
Texts produced for different purposes in different contexts have different fea-
tures, because different lexical and grammatical options are related to the func-
tional purposes that are foregrounded by speakers/writers in responding to the
demands of various tasks.

This approach reveals how language is always evolving and changing in new
contexts, and how speakers/writers participate in that evolution. It also contribu-
tes to understanding how developing new ways of using language also leads to new
ways of thinking and new forms of consciousness in students. For example, Halli-
day (1993b) has shown how new registers of written language have co-evolved his-
torically with new social processes such as scientific experimentation. Con-
structing new contexts as language is used in new ways means seeing the world in
new ways and coming to new understandings. This has great implications for the
role of language in learning the “content” of school subjects. Halliday suggests, for
example, that it is not possible to “do science” using ordinary language; that the
language of science has evolved in the way it has because the kinds of meanings
that are made in scientific discourse call for new ways of using the resources of the
grammar. From this perspective, learning new ways of using language is learning
new ways of thinking. Learning content means learning the language that con-
strues that content as students participate in new contexts of learning.
Systemic functional linguistic theory provides a means of identifying the grammatical features that make a particular text the kind of text it is, so that the relationship of linguistic choices to the situational contexts in which the language is used can be explained in functional terms. Since the way language makes meaning varies according to social contexts, and not everyone in the community has access to all the possible contexts, one of the major goals of systemic functional linguistics research has been to describe academically valued contexts of use, elucidating the linguistic features of the genres of schooling and showing the challenges that those features present to students who are developing advanced literacy (see, e.g., Christie, 1999b, 2002a; Christie & Martin, 1997; Christie & Misson, 1998; Halliday & Martin, 1993; Hasan & Williams, 1996; Lemke, 1990; Martin & Veel, 1998; Unsworth, 2000b). This research also shows how language embeds ideological positions and obscures the nature of interpretation in some kinds of texts. The linguistic analysis can raise teachers’ awareness of the power of language to naturalize certain ways of thinking and enable them to help students see how different positions are constructed in language so that those positions might be challenged or queried.

This book draws on systemic functional linguistic theory to describe the features of school-based language in functional terms. It also draws on other research on language development and language use in school contexts, done from other theoretical and analytical perspectives, to demonstrate the unified picture of language development that emerges when the various studies are interpreted from a functional linguistic perspective. As a theory of grammar within a comprehensive linguistic framework, systemic functional linguistics enables us to analyze whole texts in ways that clarify the relationship between language and context and highlight the role of social experience in the linguistic choices made by speakers and writers.

CONCLUSION

This chapter has argued that we need to think about the linguistic challenges of schooling in ways that foreground the role of students’ prior experiences and that recognize that language is a system that offers choices to speakers and writers for construing different kinds of meanings. It has explored the limitations of the conventional descriptions of “literate language” as explicit, decontextualized, complex, and cognitively demanding, and has suggested that Halliday’s functional linguistic analysis offers an alternative perspective on the language of schooling that highlights the relationship between language and learning.

Learning in school is done primarily through language, yet the language of school tasks is seldom explicitly discussed or taught in schools. The functional linguistics approach developed in this book offers a means of identifying the challenges of schooling in the way language structures texts and construes abstract,
technical, and evaluative meanings. The next chapter discusses the role of life experience in orienting children to certain ways of making meaning, showing why access to the language of schooling is not available equally to all. Drawing on research that has described the linguistic features of some early school tasks, the analysis highlights the relationship of text and context, setting the stage for the detailed linguistic analysis of the more advanced genres of schooling presented in the following chapters.
The ability to operate institutionally . . . is something that has to be learnt; it does not follow automatically from the acquisition of the grammar and vocabulary of the mother tongue.

—Halliday (1973, p. 11)

For the majority of children, starting school means confronting new ways of using language. These include using language to accomplish new types of tasks and new expectations for how they will structure what they say. Schooling brings new kinds of interaction, where students are often required to state information that in an everyday context could be taken for granted, and to specify relationships between concepts in some detail. In addition, students are expected to begin using language in a new mode, writing, which brings with it new ways of grammatical organization. These new ways of meaning-making enable participation in a wider range of tasks and contexts, so it is important that all students have opportunities to develop their language potential as they progress in schooling.

Some children’s ways of making meaning with language enable them to readily respond to the school’s expectations, but the ways of using language of other students do not. The language students bring from their communities to school is the means through which they engage new “schooled” knowledge. For this reason, it is important to value a wide range of ways of using language at school, giving different languages, dialects, and ways of meaning more social value by having them shared in the schooling context. But it is also important to provide all students with access to academic ways of using English so they can participate in new kinds of learning at school. All children enter school with language resources that have served them well in learning at home and that have en-
abled them to be interactive and successful members of their families and local communities. But many children lack experience in making the kinds of meanings that are expected at school, or with the kinds of written texts and spoken interaction that prepare some children for school-based language tasks. This lack of experience makes it difficult for these students to learn and to demonstrate their learning.

Schooling is a context in which the kinds of meanings that are made are quite different from the meanings made in more informal contexts of everyday life. Language is used in school contexts in ways that are integral to construing the academic and social knowledge that schools aim to develop. As students move into middle school and secondary school, the tasks they are asked to do become more and more dependent on control of a wide range of linguistic resources. While these ways of making meaning may appear to set up barriers for children from backgrounds that have not prepared them for participation in this context, the ways of meaning are integral to accomplishing the goals of schooling. Learning and language are closely related, and for success at school, students need to come to understand the context of schooling and the linguistic choices that realize that context.

Under the influence of the work of Vygotsky (1986), among others, there has been increased recognition of the role that language plays in the development of social and cognitive processes. Vygotsky argues that language and thinking develop simultaneously in social interaction. The development of particular ways of thinking occurs through the linguistic tools that the society uses and that become part of the sociocultural experiences of the child. This means that the kinds of conceptual knowledge that children develop depend on their social experiences and ways of interacting with others, with language the primary semiotic system through which this interaction takes place.

Much of the knowledge that schooling aims to develop in the child is not available just through everyday experience in the world; it needs to be articulated in ways that abstract from everyday life as children engage in structured experiences that provide new perspectives on the world and enable them to generalize their experience. Vygotsky describes such knowledge as “scientific” concepts, different from the “everyday” concepts that emerge through the less structured experiences of everyday life. Vygotsky believes that both scientific and everyday concepts develop through scaffolded interaction with more expert others who work with learners to help them perform at levels that they would be unable to achieve independently; what Vygotsky calls the “zone of proximal development.” Through social interaction of this kind, children are challenged to do more than they can on their own.

This suggests that a clear understanding of the role language plays in this socialization would require analysis of the structure and uses of language itself. But in fact, language is the element of learning that is most unanalyzed and least of-
ten explicitly addressed. A Vygotskyan perspective illuminates how differences in socialization practices mean that students from different backgrounds come to school with divergent preparation for using language in the ways expected at school, but does not offer concrete solutions that are specifically bound to the nature of language. A linguistic approach, on the other hand, can show how the structuring of new kinds of knowledge depends on new ways of using language and can identify the features of the language that enable schooled ways of learning. Describing learning from a linguistic perspective, Halliday (1993g) focuses on developments in the grammar that are needed to accommodate the construal of more complex kinds of meanings as children learn. Using a complementarity similar to that of Vygotsky’s “everyday” and “scientific” concepts, Halliday describes how children learn to reconstrue “common sense” knowledge in a more abstract mode as they reproduce it as “educational” knowledge, and finally to construe knowledge in specialized and technical language (Halliday, 1993g, p. 111). This perspective offers a framework for understanding how language evolves over time in the child in ways that enable learning, as learning and learning new language occur simultaneously.

Adopting this view of the relationship between language and social context and language and thinking has major implications for how the challenges of schooling are understood. The activities that students are asked to engage in result in the development of knowledge and language related to the goals of those activities. Language is the primary means through which school activities are conducted and students’ development is realized and evaluated. Both Halliday and Vygotsky view language learning as integral to, not separate from or prior to, cognitive development. In learning language in interaction with others, children “appropriate the knowledge and practices of their culture” (Wells, 1994, p. 72) as they develop scientific, non-everyday concepts that draw on ways of using language that are not part of everyday experience.1

A better understanding of the ways language construes academic knowledge is important for students and teachers, linguists and language researchers, textbook writers and administrators. This chapter reviews research that demonstrates the ways language socialization practices prepare some children for the contexts of schooling. It also reviews descriptions of school language use that highlight the linguistic choices that are highly valued in school tasks. It is these choices that can be characterized as the language of schooling. The functional linguistic analysis that follows in later chapters links the language features with the social contexts they realize to show the close relationship between language and context, and to illustrate the challenges for students whose socialization has not prepared them to participate fully in the school context.

1See Wells (1994) for discussion of the complementarity of Halliday’s and Vygotsky’s theories of learning.
LIFE EXPERIENCE AND LANGUAGE DEVELOPMENT

Language use in the classroom differs from language use in other social situations in many ways. It involves the sharing of ideas and knowledge rather than the sharing of personal relationships and accomplishment of activities together in familiar contexts. Power relationships, expectations for participation, and the forms that discourse takes also differ at home and school. When they go to school, children engage in new kinds of tasks and need to use language for new purposes. Sociolinguistic research has shown that many children come from homes and communities that do not use language in the ways associated with typical school contexts (e.g., Cazden, John, & Hymes, 1972; Heath, 1983; Philips, 1972; Scollon & Scollon, 1981; Watson-Gegeo & Boggs, 1977; see review of studies in Au & Kawahami, 1994). The study of classroom language and its relationship to the social and cultural contexts of home language has demonstrated that there are major discontinuities for many children between language use in school and community. Children from non-mainstream backgrounds have had different experiences and developed different linguistic resources from those that are typically assumed in the school setting.

The ability to draw on the linguistic features that construe academic contexts depends on experience with those contexts that may not be available in the home or community for many students, especially those who speak English as a second language, who speak nonstandard dialects of English, or whose home and community experience has not socialized them into the ways of making meanings that are expected at school. Children’s different out-of-school experiences with language affect their knowledge about expectations for language use at school, as the language and discourse forms expected at school are foreign to many children’s experiences. Knowledge about “schooled” ways of using language is differentially distributed in society, resulting in differences among students in the ways they realize in language use what is apparently the same context. How we learn and what we learn about language depends on the context of learning. Students cannot just transfer the spoken language they have developed in their homes and communities to the school context. Their experiences in school need to help them develop facility with the ways of using language that are valued there. Although it has often been noted that the language tasks that are required of children at school are different from those that many of them engage in at home, what is not always recognized is that these new situational contexts and tasks also require new uses of the linguistic resources of the grammar.

Some children come to school with prior experience drawing on linguistic features that reflect school-like tasks, having had practice with such tasks in their homes and communities. Other children have not, and so have had little experience hearing or using linguistic resources in the ways expected at school. Scollon and Scollon (1981), for example, identify practices that help young children de-
velop resources that will serve them well later in school. One of these practices is what they call “vertical constructions,” a means by which caregivers interact with children to assist them in adding new information to their utterances. For example, in (1), the adult helps the child construct a statement about the tape recorder (Scollon & Scollon, 1981, p. 152):

(1) Child: tape recorder
    use it
    use it
Adult: Use it for what?
Child: talk
    corder talk
    Brenda talk

The child is able to progressively elaborate what she says with the help of the adult interlocutor, developing, in such interaction, use of new language structures. The authors suggest that this and other types of interaction, such as the construction of narratives, are facilitative for the development of academic language because they promote the creation of a grammatically and lexically marked information structure which is high in new information and which fictionalizes the roles of author and audience. Parents and children in the middle-class families studied by Snow (1983) also engage in activities that model the language of schooling as they tell or read stories in which the author is impersonal, the setting is distanced, and contextual references have to be understood from the writer’s or speaker’s point of view. These forms of interaction are not universal, however. Scollon and Scollon (1981) also document the language development of Athabaskan children who do not gain experience with these language functions; instead, they develop expertise in alternative ways of using language.

Competence with school language involves knowing how to act in a particular context, being willing to assume the expected role relationships and having knowledge about linguistic expectations for performance of school-based tasks. As Mehan (1979) pointed out, “to be successful in the classroom, students not only must know the content of academic subjects, they must learn the appropriate form in which to cast their academic knowledge” (p. 133). Even from the earliest school tasks, teachers have certain expectations of students for how they should use language. These expectations are typically not articulated in terms of grammatical or discourse structure, but instead in terms of admonitions to “be explicit,” “use the right words,” “be more detached,” or “be better organized.” But these values are expressed and realized through particular grammatical choices that are common to school-based language tasks. Some children are able, even in kindergarten, to draw on the grammatical structures that approximate the styles expected by their teachers, but others are not. In producing the highly valued
styles, children evoke the context of schooling that matches the teacher’s expectations. These children are then considered “successful.”

Some students’ social experience in early childhood prepares them for effective participation in the language-based tasks of schooling, and others’ do not. Because the school draws predominantly on middle-class ways of making meaning, children with those linguistic experiences are at an advantage. Wells (1987), for example, found that fluency and facility with spontaneous oral language, while fairly evenly distributed among the preschool children in his longitudinal study, did not necessarily lead to success with reading and writing tasks at school. In fact, as soon as the children were assessed at school, a strong relationship emerged between social class and linguistic skills. He suggests that this is because the school assesses written language and preparation for literacy rather than competence with spoken language. The majority of students are able to cope with the speaking and listening demands of the classroom. What differentiates them and predicts subsequent achievement is their preparation to display the literacy skills that are valued by the school. Wells (1987) suggests, then, that what has been called linguistic disadvantage should be understood as relative unfamiliarity with the purposes and forms that language takes in literacy tasks.

Orientation to Meaning

Understanding the role of social experience is especially important in light of the fact that unfamiliarity with the language of schooling is closely related to social class membership. Bernstein’s (1990, 1996) theory provides an explanation for this, suggesting that people develop different coding orientations, or ways of using language, related to their social class and culture. These different coding orientations are manifested in the ways we participate in interaction. We have different senses of what is significant and relevant and have different ways of engaging in and responding to what might on the surface seem like the same contexts, based on the social relations that are characteristic of our experiences in a particular social class and culture. These different social relations and experiences are related to the power and control that people in different social groups are able to exercise in their material lives (Bernstein, 1990; see also Hasan, 1999). Orientation to interactional practices emerges from social class membership. Socialization experiences result in different senses of what is expected or valued in different interactional contexts. So even when participating in the same contexts, such as schooling, students from different class and cultural backgrounds will use language in different ways.

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2Of course there are many other factors that lead to students’ success or lack of success in school. The focus here is on the role that language plays in the construction of students as successful or unsuccessful.
Bernstein (1977), for example, found that middle-class and working-class children responded very differently to interview situations; not in the amount of speech they produced, but in the extent to which their speech used verbal strategies that are expected in such formal contexts as schooling. Bernstein found that middle-class children understood that when asked an open-ended question by an adult in an interview context, they were expected to construct particular kinds of texts using particular verbal strategies. They understood, for example, that in certain contexts questions which seemed open were actually testing questions, requiring a particular kind of response. Bernstein emphasizes the importance of distinguishing between “recognising when a verbal strategy is contextually relevant, possessing the strategy and using it” (Bernstein, 1977, p. xii).

Hawkins’ (1977) analysis of the speech of 5-year-old middle-class and working-class children also demonstrates these differences. Middle-class and working-class children employed linguistic features such as explicit noun phrases and deictic reference in different ways in language elicited by structured interviews. Middle-class children used more specific referents, while “working class children oriented towards a type of reference which is less specific and takes for granted a greater degree of common knowledge shared by speaker and addressee” (p. 183). When asked to describe a detailed picture, working-class children used exophoric reference (that; this), whereas middle-class children used nouns (the house; the book). When they were unsure, middle-class children used verbs of tentativeness and first person pronouns (it seems to me), whereas working-class children used you see, or interactive tags like isn’t it and don’t they. The children’s grammatical choices reflected the social strategies they adopted in different tasks. The frequency of adjectives produced was different by social class in one task because middle-class children were using a form of social control that involved saying someone was naughty, bad, and cross, whereas working-class children used imperative forms of the verb to accomplish the social control, saying Stop that or Don’t do that rather than You’re being naughty (p. 194). Hawkins (1977) suggests that these differences reflect the children’s social experiences with different ways of using language to accomplish similar tasks.

More recent research using Bernstein’s framework is reported in Hasan’s (1992) study of mother–child dyads in Australia. Using a more nuanced definition of social class to avoid the use of such ambiguous terms as middle class and working class, Hasan divides the mothers in her study into two categories, Low Autonomous Professions (LAP) and High Autonomous Professions (HAP). This conceptualizes social class in terms of how possible it is for the breadwinner to make work-related policy decisions which affect any aspect of the work-life of others in the place of work; and whether the breadwinner has the possibility of passing such decisions on to others who could then act as instruments for the execution of these decisions. Such a view of social class focuses on the degree of autonomy and control experienced by the parents in their workplaces. Hasan shows how differences by social class are relevant to socialization practices that prepare
children for their different positioning in society. For example, in the language used by mothers to control children, mothers from LAP families are overtly controlling in their use of language and allow conflict. Mothers from HAP families are more manipulative and avoid conflict. For example, in (2), a LAP mother wants Karen to get out of the bathtub (Hasan, 1992, p. 96):

(2) Karen: I’m not getting out  
Mother: you’ll get out.  
Karen: no, I won’t  
Mother: yes  
Karen: no  
Mother: yes  
Karen: I’m not standing up  
Mother: I’ll drag you out if I have to

In (3), a HAP mother urges Donna to get out of the bath (Hasan, 1992, p. 97):

(3) Mother: you tell me when you’re ready to get out  
Donna: OK now  
Mother: you’re not ready until the plug’s out  
Donna: well, I lost my hands and foots  
Mother: then you’d better find them  
Donna: ooh, they’re in the front so I’m getting out  
Mother: no you’re not please pull the plug out, Donna  
Donna: can’t feel it’s not anywhere . . . I feel it now  
Mother: good I thought you’d see it my way

The mother in (2) exercises control directly, using threats (I’ll drag you out) to make her authority clear. The mother in (3), on the other hand, uses more indirect means of control (you’d better; please). Children, then, learn these different linguistic strategies. The linguistic choices construe social contexts in particular ways and lead children to have different linguistic responses to what seem to be similar circumstances. Different ways of “doing” with language focus children on different aspects of the interaction (Hasan, 1992, 1999). In other words, the role of social experience is key in shaping and understanding the options for language use that children experience and learn.

Early childhood experiences prepare some children to have an orientation to learning through definitions, or to attending to principles underlying categories. Painter (1999) demonstrates, for example, how the development of use of hypothetical if clauses enables a young child to construe contexts beyond personal experience. Children first hear such clauses from their parents (If you see [a snake], don’t touch it because they’re dangerous) and then later try them out themselves (3-year-old Stephen: If you fell down bump really, really hard [you might cry, too]) (examples from Painter, 1999, p. 77). In the same way, certain kinds of interaction
and the development of certain kinds of grammatical resources also enable the child to use particular ways of reasoning; with syllogisms, for example. Children who live in contexts where these kinds of interaction take place develop resources that prepare them for the ways language will be used in schooling.

An individual child's ability to use language for particular purposes varies according to the specific demands and expectations of the context. Hasan (1996) demonstrates, for example, that some 7-year-olds are able to tell someone who is not present how to make something, but the same children may not be able to tell about an event they have participated in. In her study, those who could fluently describe what they had done had difficulty doing the other task, and used halting and ungrammatical structures in their attempts. She concludes that “the growth of language in an individual is the function of that individual’s engagement in a varied set of activities, calling for the use of language” (p. 26). In other words, language abilities develop through participation in contexts where those abilities meet needs and accomplish meaningful purposes. This means that children come to school with different strategies for language use.

As students move on in school, advanced literacy tasks (Schleppegrell & Colombi, 2002) require that they read and write texts that analyze unfamiliar topics in dense and abstract language that draws on linguistic resources that are unfamiliar to the everyday experience of many children. Rose (1997), for example, has shown how textbooks in technical and scientific subjects often do not make explicit the causal nature of the relationship between events in an explanation. Instead, students are expected to recognize implicit expression of causality in order to understand the logic of the text. Social experience with language prepares some children, but not others, to recognize the meanings in this way of presenting causal relationships. “Children of middle-class families, in which prohibitions and prescriptions are more frequently explained, sequences of why questions and answers encouraged, and obligation expressed more implicitly, may be advantaged in learning to recognize implication sequences and interpret the implicit causal relations which organize them logically” (Rose, 1997, p. 60). He argues that the ability to interpret logical relations, typically interpreted as a cognitive skill, depends on understanding the logic of cause that particular institutions’ or disciplines’ texts typically express.

Both grammatical and lexical issues are relevant to understanding the challenges of school-based language. Corson (1997), for example, focuses on the Graeco-Latin vocabulary of English and the difficulty it poses for students from different class, cultural, or linguistic backgrounds. He suggests that “exposure to the culture of literacy gives us the necessary foundations for vocabulary development within meaning systems that derive from it” (p. 682). Corson (1997) cites research that concludes that the difference between the word knowledge performance of high and low achieving students “comes from events outside school, not from school itself” (p. 683). Not everyone has the same exposure, as many students rarely encounter Graeco-Latin words in print outside of school. Corson
points out that “... knowing the meaning of an academic word is knowing how to use it within an appropriate meaning system. ... The necessary raw materials for this word learning lie in frequent encounters with words in the many contexts that display the rules for their application, and in regular opportunities to play these ‘language games’ at a high standard of performance” (p. 700).

Access to the Language of Schooling

One approach to addressing differences between home and school language use has been to suggest that all parents adopt the practices of the middle-class parents as a way of preparing children for school. In particular, joint book reading is often recommended, based on research that finds that children who come from homes where books are frequently read do better in school (see, e.g., Cox, Fang, & Otto, 1997; Peterson, Jesso, & McCabe, 1999). Cox et al. (1997), for example, compared children at two preschools and found that higher income children are more likely to control “literate register options,” but that regardless of income, children who controlled the written-like register came from homes that provided strong, child-centered book experiences. These children were able to successfully reconstruct a written-like monologue from a familiar storybook and were able to modify their own spoken stories based on personal experience to realize a “literate” register. On the basis of studies like these, parents have been urged to prepare children for school by reading to them. The underlying idea is that by engaging in practices that mimic the middle class ways of interacting, all parents can prepare their children for success in school tasks.

But Williams (2001) questions whether such strategies can be successful. He demonstrates that joint book reading is not the same situational context for all families that engage in it. Social class differences still manifest themselves in joint book reading, and the supposed benefits for developing the “literate register options” do not automatically result from the activity itself. In reading books aloud to children, caretakers from different social class backgrounds use language in different ways and thereby co-construct different kinds of meanings with the child. Williams’ (1999) study of joint book reading provides evidence that it is not the activity itself, but the way language is used and the semantic meanings that are realized that provide the preparation for schooling that comes for some children through this activity. Following Hasan’s model in investigating the joint book reading behavior of mothers and children from different social classes, Williams found that mothers in the LAP and HAP groups read similar amounts but that the total number of interactive messages exchanged between mother and child during the reading activity was three times greater for the HAP group. Although the mothers and children in both groups initiated interaction through demands for information at similar rates, there were differences in the kind of interaction that ensued. HAP mothers more frequently asked children to elaborate comments about something in the book or some aspect of their own experience
and then expanded children's responses to extend beyond a first specific comment. HAP mothers' questions were prefaced significantly more often than LAP mothers' with options that elicited the child's perspective, such as "do you think . . . ?" In general, the HAP mothers engaged their children much more in interactive discourse that pushed the child to talk about himself or herself in relation to the story and to evaluate the book as a text. Such interactions are mirrored in school-based literacy tasks in which stories are discussed and evaluated. Heath (1983) also describes differences in joint book reading behavior of mothers and children from different social groups.

It is important to stress that Williams found many similarities between the book reading of mothers and children in the two social groups. All mothers read fluently and dramatically, all addressed questions to the children and prompted the children for adequate responses, and all responded to their children's initiatives. In both groups, children spontaneously initiated conversation during the reading and predicted what was to come next in the narrative. It was only in a careful analysis of the deeper differences between the groups that the semantic variation and its significance became apparent. These differences manifested themselves in the extent of linguistic interaction that mothers and children had around the text itself as object, in the kinds of questions asked by the mothers, and in the kinds of interpretive work that the children engaged in to answer those questions. Although all mothers asked questions that demanded information, many demands for information were focused on ensuring that the child noticed key features of the illustrations, or clustered around one particular moment in the narrative they were reading. Only the HAP mothers asked the children for explanations, and this type of question occurred frequently in that interaction. It is such questions that engage the mother and child in joint co-construction of the type described by Scollon and Scollon (1981), where the mother guides the child's interpretations in response to the child's initiatives and responses, helping the child attend to particular kinds of meanings that prepare a child for the kinds of interaction and language use that schooling also develops.

It is this kind of interaction, associated with dominant social groups, that is also privileged in schooling contexts. Williams (2001) asks what the major social prerequisites would be for LAP families to adopt such practices. He points out that the social institutional status of families and their location in social formations through that status varies by social class, and that this status is reflected in and in turn construed by the kinds of interaction caregivers and children engage in during activities such as joint book reading. He argues that parents cannot be advised to ask certain kinds of questions and have it be expected that thereby the same kinds of meanings will be construed as those construed by parents whose whole relationship to the social world is of a different sort; where their status gives them power and control in ways that the status of other families does not. Williams (2001) argues that it is contexts that seem similar that lead to misrecognition of deeper differences related to social status. He calls this "same-
ness but difference” as he demonstrates how the HAP interaction extends meaning relations beyond a specific instance, and so has the potential to develop children’s “individuated literate consciousness.” His statistical analysis of a large corpus of joint book reading shows significant differences in the semantic features of the activity according to social class. It is through the careful analysis of the linguistic choices and the meanings they construe that differences in underlying contexts are revealed. Even when interaction is ostensibly “doing the same thing,” the meanings that are construed can be different. So it is not just engaging in an activity such as joint book reading that is important, but how meanings are made in interaction that prepares some children to easily engage in similar kinds of activities at school.

A child’s orientation to particular ways of using language has both social and psychological dimensions, as it develops in social interaction, but manifests itself as the particular skills of the individual child. In Bernstein’s formulation, social class membership shapes and positions children in terms of what they perceive as significant and relevant in their interactions with others. Each context activates certain kinds of meanings that prompt children to draw on particular lexical and grammatical resources that in turn realize the context in particular ways (Hasan, 1999). This makes for a dialectical relationship between language and context as the meanings language makes always shape and are shaped by the social context. While language use provides evidence for the differences in children’s backgrounds, more importantly, from a functional linguistics perspective, the language provides evidence about how the context is being understood by the children.

With different life experiences with language, children inevitably come to school with different orientations to meaning, prepared to attend to different kinds of meanings and to construe meanings in different ways. Differences in ways of construing meaning are functional for the kinds of lives that people in different social circumstances live in our society. Cultural differences are part of this, but as there are many similarities between the same social classes in different cultures, a focus on social class is important for understanding the different kinds of social and interactional experiences children have outside of school and for providing the social experiences at school that enable students to participate in the contexts of society that schooling aims to prepare students for. As Painter (1996) points out, “variation in ways of meaning according to social class membership is interpretable not in terms of richer or poorer linguistic experience, but in terms of a linguistic experience which enables the learners, within the family, to construe the social system in a way adjusted to their social positioning” (p. 81). But if one of the goals of schooling is to extend students’ ability to participate in a range of social and academic contexts, then one of the tasks of schooling should be to enable students to make new kinds of meaning. The next sections explore what this implies for students’ performance in school language tasks.
Children’s experiences prepare them to respond to particular social situations in particular ways, and their responses indicate their conceptualizations of the contexts of the discourse, construing the context, for example, as “everyday” or “academic.” In the context of schooling, the tasks students are asked to do require that they display knowledge authoritatively and structure their spoken and written texts in expected ways. Different linguistic choices contribute to greater or lesser success in accomplishing this. Analysis of the different ways of making meaning, both in what is valued by the schools and in how students respond, then, illustrates how we can go beyond the kind of characterization of “literate language” described in chapter 1 to specify the features of the language of schooling in linguistic terms.

The following section demonstrates that the school has particular expectations for valued ways of using language. Research on two tasks—sharing time, a typical event of the early years of schooling, and giving definitions, a task that is typical of the later years of primary school—illustrates how children use language in different ways to respond to the same tasks of schooling, and how those who choose the less valued forms are typically judged less competent. The different ways of responding are related to students’ socialization and prior experience.

Sharing Time

A good example of the new contexts children face at school and the different ways they respond to the linguistic demands comes from research on a common speech event in kindergarten and the early grades—“sharing time,” also known as “show and tell” or “morning news.” During sharing time, children take turns standing up in front of the class and telling about an object they have brought to school or about an event in their lives. The teacher typically interacts with the student as he or she shares, asking questions and prompting for information. The task for the student is to take on the role of the expert, standing before the class and engaging in monologic discourse. Michaels and her colleagues have written extensively about this event (Michaels, 1981, 1986; Michaels & Cazden, 1986; Michaels & Collins, 1984; Michaels & Cook-Gumperz, 1979; Michaels & Foster, 1985; Cazden, Michaels, & Tabors, 1985), and other researchers have also examined this activity and described it in similar ways (e.g., Christie, 1985, 2002a).

Michaels observed that the questions that teachers ask and the way they interact with children during sharing time reveal an expectation that the student’s sharing time contribution will display features of language that are similar to those that typically appear in literacy contexts. The way that this research characterizes the features that are important for success in sharing time is similar to the ways written language and school-based demands were characterized by Olson, Snow, and others discussed in chapter 1. Michaels suggests that what is
valued in sharing time contributions is explicitness, clear discourse structuring, and assumption of unshared background between speaker and audience. The teacher promotes explicitness by asking for spatial and temporal grounding and the naming of things that are available for all to see. The speaker is to assume that the audience does not share background knowledge or context. Teachers also expect clarity of topic statement and a particular kind of discourse structuring that elaborates the topic, introduces and marks topic shifts with lexicalized links, and draws on other linguistic means of making the structure of the sharing “text” transparent. In (4), for example, the teacher pushes Mindy in this direction (Michaels, 1981, p. 431):

(4) Mindy: When I was in day camp we made these um candles
Teacher: You made them?
Mindy: and uh I-I tried it with different colors with both of them but one just came out this one just came out blue and I don’t know what this color is
Teacher: That’s neat-o Tell the kids how you do it from the very start Pretend we don’t know a thing about candles OK What did you do first? What did you use?

The teacher co-constructs Mindy’s meaning, helping scaffold the procedural text that the teacher values and contributing to Mindy’s linguistic and academic development. Not all children are able to effectively construct such discourse, or even to co-construct it through interaction with the teacher, as many children are not familiar with the academic context and with the sorts of meanings that are typically presented at school. It is not that they are unfamiliar with the linguistic elements needed, for example, to be lexically explicit, but that for them, the context of sharing with their peers does not prompt them to assume the more academic stance that some children are already aware is required. These children, then, are not able to structure their sharing time accounts in the ways the teacher expects. So even in kindergarten, the teacher expects the children to produce language which construes the more academic context of schooling. The kindergartners are expected to display knowledge authoritatively in ways that are particular to this speech event. If students’ sharing episodes do not draw on the relevant linguistic features, the text does not construe the expected or appropriate meanings, and teachers may consider the sharing to be irrelevant or unmotivated (Michaels, 1981).

Gumperz, Kaltman, and O’Connor (1984) suggest that some ways of using spoken language are more like expectations for writing, and some styles of speak-

\[3\] Christie (2002a) points out that it is also difficult for teachers to co-construct sharing time contributions with children because the child and the teacher do not have the same information about the activity. She suggests that sharing time (for her, “morning news”) is limited in its potential for developing academic language precisely for this reason; that academic language develops in contexts where students and teachers are able to use language in talking and writing about shared experiences.
ing are more readily transferable than others into written texts, making it easier for students from some backgrounds to write texts that their teachers value. They found, for example, that children’s oral-style spoken narratives used temporal conjunctions such as then in a causal sense or to shift agent focus, and sometimes left pronoun referents ambiguous. Oral-style narratives used more verbal complements and used intonation and other prosodic conventions to describe new characters or reestablish the character’s identity, whereas literate-style spoken narratives used more nominal complements and complex nominal syntax such as relative clauses for this purpose. As later chapters will show, nominal complements are typical of school-based registers as they allow more information to be packed into each clause.

Differences in language use range from phonological to discourse-organizational choices. For example, Michaels and Collins (1984) and Collins and Michaels (1986) conducted an experiment that elicited children’s narratives in speech and writing. They found differences in what they call thematic cohesion—the devices and strategies by which certain information is highlighted and other is backgrounded, how topic shifts are signaled, and how perspective within a topic is established and maintained. They analyzed how prosodic, lexical, and semantic devices contribute to these linguistic differences and they found that these differences were also related to children’s difficulty in the written mode. Children who used prosodic cues rather than lexical and syntactic devices to signal perspective shifts and logical connections during sharing time episodes also had more difficulty constructing written narratives that met teachers’ expectations (Michaels & Collins, 1984).

The ability to adopt linguistic features of “literate-style” language enables students’ success in a variety of school-based tasks, and yet it is not the linguistic features that are typically in focus for the teacher. The teacher in Michaels and Collins’ study, for example, was not able to be explicit about her expectations for students beyond saying the topic should be “interesting.” The researchers found, however, that interesting topics that were not presented in the highly valued style were not accepted, and that the teacher had difficulty providing scaffolding assistance for children who did not use her implicit framework for presentation of their sharing episodes. What the teacher actually wanted and why it was valued often remained obscure to the children. On the other hand, children who shared the teacher’s discourse style were typically appropriately prompted by the teacher to provide more new information as elaboration after a response, so that through a sequence of questions and answers, teacher and child together constructed a single, expanded message (Michaels, 1986). This kind of exchange gives the child practice at being lexically explicit, incorporating more information into each clause, and learning the patterns of discourse that are characteristic of school-based language tasks, providing a basis for further development of academic language.

Although Michaels and Collins (1984) call sharing time episodes “oral preparation for literacy,” preparation may not be the appropriate term. If some children
already know this style and others do not, it is not preparation, but instead, the beginning of the differentiation that will show some students to be more successful than others. Michaels and Collins report that some children get more “practice” because their styles mesh better with teachers. Those children whose styles do not mesh in this way experience interruption, misunderstanding, and dismissal of their sharing time contributions. The real expectations for discourse and grammatical structuring during this speech event, and why such structuring enables a student to organize knowledge in particular ways, are typically not made explicit, and so practice is only available to those students with prior understanding of the goals and expectations for this activity.

That means that the child who comes with prior experience in making the kinds of meanings represented by sharing time episodes is at an advantage, and the child who is not familiar with this context finds him or herself continually interrupted by the teacher with admonitions to “stick to the point” or “talk about one thing only” (Michaels & Cook-Gumperz, 1979). To be successful, the child needs to be able to evoke the expected sharing time context by using highly valued grammatical and discourse forms. Some children get preparation for this prior to their entry to school, while other children engage in different kinds of interaction that are not reflected in classroom activities. Sharing time is just one example of the many situations children find themselves in where their previous language socialization makes the difference in how well they are able to adapt to and participate in school-based tasks that call for specialized ways of using language.

Participating effectively in any speech event requires understanding the purpose of the event and the expected roles of the participants, and being willing and able to make the linguistic choices that enable success in that speech event. The more familiar the event and the more purposeful the task, the easier it is for participants to understand the parts they are to play. That is why children who come to school with experience with school-based tasks in meaningful contexts have an easier time knowing what is expected from them. This familiarity comes from experience and depends on shared purpose.

Definitions

Definitions are another school-based task that reveals how expectations for linguistic performance are different in the school setting from what they would be in ordinary language use and how students’ different socialization experiences prepare them in different ways to respond to the school’s expectations. Snow, Cancini, Gonzalez, and Shriberg (1989) observed that teachers often request definitions from students during lessons, co-constructing with the class a good formal definition. They also found that the most common vocabulary teaching device in second- through seventh-grade classrooms was giving a list of words and asking children to copy definitions out of the dictionary for homework. Such tasks are also described in other research that reports on classroom activities (e.g.,
Bloome, 1987). This means that giving definitions is an important way of using language at school.

But children vary in their inclination or ability to use the linguistic formulations that construct the formal definitions that are valued at school. In a study of 137 second- through fifth-grade students, including both native and nonnative speakers of English, researchers gave the children a simple, familiar noun and asked them to tell what it means (Snow, 1990). The definitions were categorized as formal or informal and also scored for communicative adequacy. Definitions were considered formal when they were made up of a statement that sets up an equivalency relationship, using a superordinate term with a restrictive complement that includes criterial information about the word's meaning; for example, *a knife is something which you use to cut with* (Snow, 1990). Informal definitions, in contrast, contained primarily functional or descriptive information; for example, *a cat is to pet; or cats are furry and my cousin has two of them* (Snow, 1987).

The results demonstrate that although most children are capable of giving meaningful explanations of word meanings, not all children structure these in the same way. Snow et al. (1989) found that some children treated a request for a definition as a formal school task, giving “autonomous, well-planned, lexically specific information about the word meaning without incorporating either conversational devices or personal information. Other children tended, in contrast, to treat the request for a definition as the introduction of a new conversational topic, and to provide information but no definition in response” (p. 239). From the criteria and examples, it is clear that the formal definition draws on a linguistic formulation that has both lexical and grammatical expectations; specifically, an approach that expands and elaborates a noun phrase to incorporate information (*something which you use to cut with*) and that structures the clause in such a way that the expanded noun phrase defines the target word. Presenting this highly valued form results in a characterization of the definition by Snow as “well-planned,” giving some students credit for engaging in a thinking process that the others appear to fail to engage in. As discussed earlier, it is common for these more highly structured ways of using language to be characterized in cognitive terms.

But here again, the students' social experience is of utmost importance in enabling them to construct such statements. In order to produce the highly valued form, students need to be familiar with the expectations of the social context. Explaining what something means or is is a common occurrence in everyday language. But giving an effective definition at school requires different linguistic resources from those needed to define words in conversational interaction. In other words, some language tasks at school are formalized versions of functions that children perform in ordinary conversation, requiring different linguistic resources to accomplish similar functional goals.

The differences that Snow found among the children she studied were not just a function of age, but also reflected social class and academic achievement, lead-
ing Snow to conclude that the major explanatory variable for students’ differential performance on this task is prior experience with the definition genre. No differences were found between the middle-class and working-class children in the communicative adequacy of the definitions they gave; all were able to demonstrate that they knew the meaning of the words (Snow et al., 1989). Middle-class children tended to give formal definitions, and younger middle-class children were similar to older children of all social classes in being able to produce the “specialized discourse genre of the formal definition” (p. 244). Snow et al. (1989) also found that formal definitional skill correlated positively with reading scores on standardized tests, while use of informal definitions in a conversational style correlated negatively with those test results. Middle-class children and children who do well in school are most likely to produce a formal definition, suggesting the role of experience in this task.

Snow notes that the problem for students is with the definitional form, not knowledge about the word itself, since some children fail to give formal definitions for words they know well. Although the communicative value of formal and informal definitions is the same, their value as an academic contribution differs. The more highly valued formal definition depends on choosing linguistic features that are evoked in this context for some children, but not for others. Some children recognize the context evoked as academic; others do not. Snow suggests that some children may use more formal definitions than others because they have had more opportunity to practice this form and they recognize situations that call for this use of language. Some children experience home and school interactions that help them learn to think about words from a formal definitional perspective.

This result is also underscored by comparison of native and nonnative speakers on this task. Snow (1990) compares native and nonnative speakers of English and bilingual students who were tested in English and French. The strong correlation she finds between schooling in English and the ability to give formal definitions, for second language learners, argues that it is opportunity to practice definitions that enables students to produce this genre (Snow, 1990). All children can give functionally adequate and communicatively effective definitions of common objects. However, they differ significantly in their ability to show knowledge of what is expected in a formal definition, a school-based genre. And these differences in ways of using language have repercussions that persist into the higher grades and have an impact on the development of more advanced levels of literacy as well.

Both the sharing time and the definition research show that students are being judged according to the linguistic choices they make in performing the tasks of schooling. Both clause-level and broader text-level choices are relevant to this. As children proceed through the school years, the expectations for particular linguistic choices increase and children are challenged to increasingly adopt ways of structuring their spoken and written texts to meet more advanced demands.
Formally framed contexts intended to elicit use of abstract or elaborated language may instead evoke more casual speech from some children because not all children are oriented in the same way toward language use through their socialization. The experience that children bring to school then affects what they are able to learn. Wells (1994) notes that although it would be possible to select school tasks that build on the experiences children have already mastered, regardless of their backgrounds, he also points out that “the tasks and modes of discourse that tend to be privileged are precisely those that are least familiar to nonmainstream children” (p. 76). Students who come to school with an orientation to ways of meaning that are valued at school are successful and then have more opportunities to further develop their language resources, while students who have different orientations to meaning are often tracked into programs that provide few opportunities for language development.

Collins (1982), for example, shows that tracking of students into reading groups that reflect their ability levels in the early grades results in fewer opportunities for interaction and collaboration with the teacher for students identified as poor readers. His analysis of the interaction between teachers and students shows that teachers incorporated high-group children’s ideas in their succeeding questions significantly more often than low-group children’s and that teachers also focused on different kinds of reading skills with the high and low groups. Even though the children’s behavior was similar, the teacher gave more phono-grapheme and vocabulary cues to low groups, but more syntactic and semantic cues to high groups. Low-group students, then, got less comprehension practice. Low groups in Collins’ study had three times as many turn disruptions as high groups, giving low-ranked students fewer opportunities to engage in self-monitoring and self-correction, as their turns were interrupted by others calling out answers, etc. The students who needed practice the most actually got the fewest opportunities for meaningful interaction with the teacher.

Teachers also had more difficulty understanding the points made by children in the low group (Collins, 1987). Collins suggests that intonational differences in the ways children used spoken language contributed to the communication difficulties, and shows that students who did not use language in expected ways were evaluated as less effective. The result was that low-group children’s status as poor readers was reinforced through the reading group activities. Collins suggests that such teacher behavior is for the most part an unconscious response to discourse styles, but it leads students to believe they will not succeed, as low-group students then do not develop the expectation that texts will be meaningful (Michaels & Collins, 1984). Once identified as a poor reader or writer, a student’s opportunity to learn becomes even more diminished under current practice. Teachers use different interactional strategies with different groups of children, based on assessment of their “abilities.” The quality of this interaction in turn strongly influ-
ences the complexity and coherence of the language produced by students (Cazden, 1988).

Other research has also shown that when ways of using language differ, interlocutors will make judgments about speakers that are unconscious but biased in ways that disadvantage people from non-mainstream ethnic groups and social classes. Aspects of language that speakers are unconscious of affect their evaluation of the discourse production of others. For example, Michaels and Cazden (1986) and Ramanathan-Abbott (1993) found that adults evaluate children’s narratives as interesting and effective if they share a narrative style with the child, but find other styles of presentation confusing or disjointed. Michaels and Cazden (1986) played taped versions of two children’s sharing time narratives to adult audiences. The same person recorded the different narratives so that the ethnicity of the original speaker was not revealed through accent or other phonological features. Adult perceptions of the quality of the children’s stories correlated with race, with Black adults finding the Black child’s narrative more interesting and complex than the White child’s narrative, while White adults found the White child’s narrative more interesting and better organized. This demonstrates that what we value in language performance is deeply rooted in our own experiences with language, and these experiences vary by social class and ethnicity.

Teachers’ unconscious responses to different discourse styles can have a major influence on children’s access to learning. Discourse patterns related to ethnic and social class background affect the quality of teacher–child collaboration in ways that can deny some children access to key learning opportunities in the classroom. If differences in discourse style are valued differently by different social groups, an important part of enabling teachers to work more effectively with students with whom they do not share cultural or class membership is helping them understand those students’ discourse styles and how they may be different from mainstream expectations. With an understanding of different styles and a means of explicitly teaching about the linguistic expectations of schooling, teachers can focus on helping students expand their linguistic repertoires for making meaning in academic contexts.

CONCLUSION

This chapter has shown how certain kinds of interaction prepare children from some backgrounds to recognize the expectations of schooling and respond linguistically in ways that are highly valued. These children have developed implicit knowledge of how language is used to construe meaning in school-based tasks that facilitates their entry into and success in school contexts. As we have seen, the contexts and role relationships of middle-class homes that constitute preparation for literacy cannot be reduced to a set of interactional practices that can be
adopted by all families. Those social practices are integrally bound up with the roles that middle-class families play in the larger society. Expecting that similar practices could be undertaken by families not in these social circumstances, or that these practices could be incorporated into classroom teaching, is not realistic. In any case, socializing all students to middle-class interactional patterns is not an appropriate goal for schooling. In a multicultural society, it is important to value different ways of making meaning and appreciate the different ways of using language that students bring with them to school. At the same time, however, it is important that schooled ways of using language not be a hidden curriculum through which some students are denied access to full participation in the institutions and practices of society.

The ways of meaning that children bring to school need to be recognized, respected, and further developed. Understanding how meaning is made in school-based texts does not require that students change the ways they interact and use language in other contexts. In addition, definition of the skills and knowledge considered valuable and important for children to develop needs to be expanded to encompass ways of meaning that are currently not valued. However, because certain ways of using language are powerful in what they can accomplish and provide access to, all students need to be given the opportunity to learn to recognize the power of language and have the choice of adopting powerful forms. Delpit (1995), among others, has argued that children are disadvantaged if they are not provided with access to the modes of discourse that give them choices in today’s society. If schools are to promote a more equitable society, they need to give access to those privileged modes. Doing less perpetuates the current situation where many students without prior home and community experience with the language of schooling continue to fail.

From both Vygotskian and Hallidayan perspectives, language is important for constructing the generalizations and ways of thinking that schooling requires. This book draws on Halliday’s theory as a linguistic framework that demonstrates how learners’ grammatical choices simultaneously construe both experience and role relationships as they speak and write texts that have particular social and cultural purposes. The theory of systemic functional linguistics explains how the relative abstractness and condensation of information that characterizes the kinds of texts expected at school is realized at the clause level and in discourse structure and is functional for construing the kinds of meanings that schooling requires.

Just as the concepts of schooling are often removed from direct experience, the language that construes those concepts also differs from the language used in ordinary interaction about everyday things. It is not just in definitions and sharing time events, but in a myriad of other contexts at school that similar linguistic features construe the meanings that are being developed. These features realize the context of schooling, as a typical constellation of grammatical and discourse features characterizes school-based texts, expected and reproduced over and over
again in a range of tasks at all grade levels. The framework of systemic functional linguistics provides a rich understanding of the role that language plays in this process and illuminates the linguistic demands of schooling. It provides tools for helping students recognize the ways that language construes meanings and realizes social contexts, making transparent the linguistic resources that promote learning and the development of new ways of thinking.

This chapter has shown that certain kinds of grammatical choices are mentioned again and again in the research on children’s language use at school. Chapter 3 shows that the features described in the research on sharing time, definitions, and other school-based tasks are elements that are typical of and valued in the language of schooling, and are functional for success in learning.
When children learn to read and write, they have to enter a new phase in their language development. . . . In the process of becoming literate, they learn to reconstitute language itself into a new, more abstract mode. . . . Reconstituting language means reconstituting reality: Children have to reinterpret their experience in the new mode of written language. This is not just a matter of mastering a new medium . . . it is mastering a new form of knowledge: written educational knowledge as against the spoken knowledge of common sense.

—Halliday (1993g, p. 109)

Chapter 2 demonstrated that there are linguistic expectations for students’ language use at school, and that these expectations reflect the language practices of some social groups, but not others. If only certain kinds of socialization practices are reflected in the tasks that children face at school, it is important to understand what the challenges of these practices might be for students without prior familiarity with them. This chapter, informed by the framework of systemic functional grammar, provides an overview of the linguistic features typical of the language expected at school. It examines differences between the registers of schooling and the registers of informal interaction to develop a framework for analysis in chapters 4 and 5 of the types of texts that students need to read and write at school.1

Some may find it unclear why the linguistic features are in focus here, when it has been established that the pathway into these ways of using language is through social experiences. Why not just focus on the social experiences that stu-

1Throughout this book, text is used to refer to both spoken and written language.
students need for success at school, and let the linguistic features evolve and develop in those meaningful contexts of use? Certainly it is important that classrooms provide meaningful opportunities for students and teachers to share experiences that become the focus of spoken and written language activities in different subject areas. Through such experiences, contexts are created for development of academic language. But teachers also need a better understanding of the features of the language they aim for students to develop, and so the focus here is on the forms that language takes in academic contexts. Academic texts make meanings in ways that are informationally dense and authoritatively presented. At the same time, these texts embed ideologies and position readers in ways that can seem natural and unchallengeable. Students and teachers need tools for unpacking the meanings and recognizing the positionings and ideologies.

This is why the focus of this book is on making the expectations for language use at school explicit. Raising teachers’ and students’ awareness of how linguistic choices make the texts of schooling the kinds of texts they are can enable participation in the contexts of learning those texts help create. The language of schooling, whether spoken or written, is typically organized in patterns that are different from the organization and structure of informal spoken language. Students are sometimes told, “if you can talk, you can write,” and are urged to draw on their oral language competence for school tasks. Although this may be an appropriate initial strategy, in the long run, students need to develop new ways of structuring language for academic tasks. The grammatical choices that are functional for engaging in informal interaction are not effective in accomplishing many school-based tasks.

The functional linguistics framework adopted here focuses on this notion of grammatical choice in order to highlight the point that different selections from the lexical and grammatical options available in the language result in different kinds of spoken and written texts that are valued differently in different contexts. Such an analysis enables teachers and students to recognize the active role of the language user and to identify the kind of attention to language that will be most effective in doing different kinds of school-based tasks. Currently, very little focus on grammar or discourse is part of the school or university curriculum, so even teachers who want to adjust to or account for the different ways their students use language lack tools for doing this. This book provides tools to identify the lexical and grammatical features that are most relevant for understanding the linguistic structure of school-based language. Because linguistic choices realize particular contexts, understanding the differences between the language used in informal contexts and the language that is typical of schooling contexts promotes appreciation of the way meanings are made at school and how particular linguistic choices make a text the kind of text it is. Such understanding can inform pedagogical approaches to reading and writing instruction and may ultimately even encourage a reconsideration of the expectations of schooling. In addition, a clear perspective on the grammatical features that are functional for school success
provides a foundation for research on language development and the learning of new registers.

GRAMMAR AS A MEANING-MAKING RESOURCE

Chapter 2 showed that research on language in education typically focuses on particular grammatical and lexical features of students’ language production, identifying these as especially relevant to language tasks at school. This chapter provides an explanation for these findings by considering the grammatical and lexical features of texts in terms of how they realize particular registers that construe different kinds of social meaning. This approach to language analysis is inspired by systemic functional linguistics (Halliday, 1994).

Functional grammar analyzes language in terms of what it enables us to do and to mean (Halliday, 1994). Systemic functional linguistics is a linguistic theory that sees language as a social process that contributes to the realization of different social contexts. The grammatical analysis is functional “in the sense that it is designed to account for how the language is used” (Halliday, 1994, p. xii), offering a principled basis for describing how and why language varies in relation to both who is using it and the purposes for which it is used (Halliday, 1964; Halliday & Hasan, 1989). Functional analysis identifies how grammatical structures realize social meanings and how the meanings construe different contexts. Clause-level elements are explained by reference to their functions in the total linguistic system and are linked with contextual variables to show how the situational context is realized through linguistic choices. This makes functional grammar a powerful tool for analysis of spoken and written texts.

A functional grammar is not just concerned with labeling grammatical elements according to the syntactic category they represent (nouns, verbs, adjectives, etc.) nor with identifying the role that these different elements play within a sentence (subject, object, etc.). Rather than analyzing linguistic structures in isolation or as abstract entities, a functional approach identifies the configuration of grammatical structures which is typical of or expected in different kinds of socially relevant tasks and links those linguistic choices with the social purposes and situations that the “texts” (spoken or written) participate in. It can therefore reveal how the context of schooling is realized in the language used in the texts and tasks that constitute classroom practices.

A key feature of functional analysis is its focus on register as the manifestation of context. Register is the term for the configuration of lexical and grammatical

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2Register has been defined differently by different authors. Kinneavy (1971, p. 36), for example, talks about four categories/modes of discourse: narrative, classification, criticism or evaluation, and description. He makes the point that it is the aims of the discourse which are most relevant to understanding their features. Biber’s (1995) notion of register is similar to what systemic functional gram-
resources which realizes a particular set of meanings. Halliday (1978) defines register as “a set of meanings that is appropriate to a particular function of language, together with the words and structures which express these meanings. We can refer to a ‘mathematics register’, in the sense of the meanings that belong to the language of mathematics . . . and that a language must express if it is being used for mathematical purposes” (p. 195). Register is not just about lexical choices. “Registers . . . also involve new styles of meaning, ways of developing an argument, and of combining existing elements into new combinations” (Halliday, 1978, p. 196). Because meanings are construed through language, the language that construes particular social meanings comprises the register of that social context.

Register variation is responsive to differences in the context of situation Halliday describes in terms of field (what is talked about), tenor (the relationship between speaker/hearer or writer/reader), and mode (expectations for how particular text types should be organized). These different aspects of the context of situation are realized in lexical and grammatical choices. The lexico-grammar, then, is seen as construing three kinds of meanings, corresponding to field, tenor, and mode: the ideational, interpersonal, and textual. In every clause, we simultaneously construe some kind of experience, enact the role relationship between speaker and hearer or reader and writer, and structure texts so that they make coherent wholes. The way we do this varies according to the field, tenor, and mode variables that constitute the context of situation. Elements in the three areas of the grammar can be analyzed to reveal how language realizes different contexts through different grammatical and lexical choices, with the field of discourse realized in ideational resources, the tenor of discourse realized in interpersonal resources, and the mode of discourse realized in textual resources. This three-way perspective is used to examine the grammatical and discourse features of different kinds of texts from the point of view of the kinds of meanings they construe. This approach links function and meaning with grammatical expression, accounting for the linguistic features of whole texts in terms of how those features combine to make the text the kind of text it is.

Table 3.1 presents some of the particular grammatical features associated with realization of field through ideational choices, tenor through interpersonal choices, and mode through textual choices (Halliday & Hasan, 1989). These are features that can be analyzed in any text.

marians typically refer to as genre; that is, the distinctions among different text types (see chap. 4). The level of detail at which register is specified can obviously vary; the goal here is to specify register features broadly enough to contrast academic language with informal interactional language.

3Halliday (1964) distinguishes between register and dialect, in that dialects vary according to the user, reflecting social structure as they enable different people to say the same things in different ways. Registers, on the other hand, reflect the types of activity that are constituted by language, and are ways of saying different things. Students come to school speaking different dialects, and they also differ in their experience with linguistic registers.
Table 3.1 indicates how analysis of nouns, verbs, and other “content” words reveals what is being talked about. Noun phrases (nominal groups) present participants in a clause, and different types of nominal groups and how they are expanded and elaborated are aspects of register differences. The verbs in a text, along with their transitivity patterns (the grammatical constructions associated with them) can be analyzed to reveal the kinds of processes that the text construes, where different types of texts have verbs of different semantic types, related to the context the text is realizing. Prepositional phrases, adverbial adjuncts, and other resources that add information about place, time, manner, etc., construe the circumstances associated with these processes. These participants, processes, and circumstances are the experiential elements of the ideational meaning. In addition, ideational meaning is also construed through the logical connections in a text; the conjunctions and other resources that realize the relationships among the experiential elements.

Most grammatical frameworks focus on these elements of field. What systemic functional grammar contributes is an expanded understanding of linguistic resources by incorporating a simultaneous focus on two other dimensions, tenor and mode. Tenor refers to the role relationships being construed through the text or interaction, including the stance or attitude of the speaker/writer. Table 3.1 shows that tenor is realized in interpersonal grammatical choices such as mood (whether statements, questions, or demands), modal verbs and adverbs (e.g., should, could, may, probably, certainly, etc.), intonation (in speech), and other resources for attitudinal meaning that are found throughout the grammar.
Mode refers to the way the text participates in the social activity. One dimension of mode is whether the text constitutes the activity, as in a meeting, where spoken language actually creates the meeting, or in a lecture, where the lecture is constituted through the language in which it is given; or whether the language accompanies the social activity taking place, as when people talk about something they are doing or use writing to describe pictures with captions. The language is structured differently when it supports nonlinguistic aspects of a shared context than when the context is created mainly through language itself. Another mode dimension is the distance and availability of feedback between speaker/hearer or reader/writer. This dimension accounts for general differences in written and spoken texts, so that the language used during a meeting differs from the language of a written report of the meeting. Differences in mode also account for many of the differences in language structure in a written description that accompanies an illustration compared with one that has no visual support. The textual resources of the grammar that realize these differences include cohesive devices, clause-combining strategies, and thematic organization.

The ideational, interpersonal, and textual grammatical elements work together simultaneously to realize the context of situation (field, tenor, and mode) of a particular text. It is the combination of these elements in different configurations that realizes different registers. The functional nature of this grammar, then, does not refer to functions in terms of such speech acts as promising or declaring, nor does it refer to functions as the word is used in language teaching, where asking for information or giving advice are considered language functions. Instead, the functional grammar that provides the framework for the analysis here focuses on higher level metafunctions, recognizing that in every English clause, three things are going on simultaneously: something is being talked about (ideational metafunction), social relationships are being established and maintained (interpersonal metafunction), and a text is being structured (textual metafunction). The functional grammar helps us see which particular grammatical choices participate in construing these different kinds of metafunctional meanings. Different constellations of grammatical choices result in spoken and written texts that realize different contexts of situation, thereby constituting different linguistic registers.

Registers vary because what we do with language varies from context to context. Different register choices are more or less valued, or more or less effective, in the realization of particular text types in particular situations. A speaker/writer always simultaneously talks or writes about something, enacts an interpersonal relationship with the listener or reader, and creates a textual context for the information to be presented as a message. A text that realizes the expected register is most likely to be considered effective. Registers can be described at varying levels of specificity and detail, and chapters 4 and 5 examine register features of particular types of school-based texts, looking at more specific features of tasks and genres in their disciplinary contexts. Within each sub-
ject area students encounter texts with lexical and grammatical constellations that reflect the purposes and assumptions of that discipline. This chapter, however, focuses on register at a broad level, identifying the features of language that realize school contexts very generally and contrasting these with the features that typically realize the interactional registers that students more frequently use in their everyday lives. Analyzing the differences between ordinary conversational interaction and school-based texts reveals some major challenges of the language of schooling.

Because the choice of different lexical and grammatical options is related to the functional purposes that are foregrounded by speakers/writers in responding to the demands of various tasks, major differences are revealed in contrasting the constellation of register features that typically occurs in written academic language with that of informal spoken language. The spoken/written dimension is most in focus here, since this difference in mode is highly relevant to the linguistic choices being made. But both writing and speech can take a variety of forms, depending on purpose, interactants, and other contextual variables, and the register differences which characterize written language in these examples are also features of much school-based spoken language, especially the spoken language used to summarize and present information. Contrasting everyday, informal interaction and the language typical of schooling illustrates how these registers are broadly different because what is being done with language varies greatly in these two contexts. Most obviously, informal interaction is jointly constructed in real time, so the grammatical choices are those that are functional for the collaborative nature of this discourse. School-based texts, on the other hand, more typically reflect in their grammatical choices the fact that speaker and listener or writer and reader do not interact directly and that the speaker/writer has time for planning and revision. But the registers also realize the different kinds of ideas, role relationships, and patterns of text that enable speakers/writers to respond to the needs of these different contexts. The grammatical choices evoke for participants the social meanings that the language helps instantiate.

The grammatical and lexical features of the registers of school-based tasks are naturally related to what language is expected to accomplish in the school context, so analysis of the grammar provides a better understanding of the functions of such texts in construing knowledge and in helping students effectively participate in advanced literacy tasks. This chapter demonstrates how these features are functional for the kinds of tasks students are expected to perform at school.

**LINGUISTIC CHOICES REALIZE SOCIAL CONTEXTS**

The challenge for all language users is to create texts that realize the expected social context; cohesive texts that are coherent with respect to register. Chapter 2 showed that texts that fail to effectively signal the context in which and
for which they are created are often seen as lacking coherence. Children who do not present their sharing time contributions with the expected register variables, for example, are often judged negatively by their teachers, even when their contribution is comprehensible. Informal definitions likewise fail to signal the academic context that the formal definition signals participation in. Texts that do not signal understanding of the school context present the language user as a person who is not responding adequately to the situation in realizing the language task.

The following sections show how the situational variables of field, tenor, and mode are realized in ideational, interpersonal, and textual choices in the grammar, and how these choices are different in interactional and school-based contexts. Each of the situational variables is analyzed in terms of the grammatical choices that are relevant for understanding how that aspect of the situation is realized through particular register choices. For example, the presentation of ideas, the field variable, typically draws on broadly different kinds of lexical and grammatical choices in informal conversation and the language of schooling. Similarly for tenor and mode, the different role relationships and different kinds of texts that are typical of these two broadly defined different situational contexts are realized in different register choices.

The spoken texts that illustrate the points in this chapter come from group interviews with children who explored questions about students and teachers interacting in the classroom (Schleppegrell, 1989). Although these interviews took place at school, they were structured to encourage discussion among the students, and so the patterns of language that the students draw on to jointly construct texts in this context contrast strongly with the kind of language that they encounter in their reading and have to produce in their writing. Informal conversation in other contexts is even more distinct from the kind of language students need to engage in for success at school. The written texts used as examples in this chapter come from textbooks as well as from students’ writing (see also Schleppegrell, 1996a, 1996b; Schleppegrell & Colombi, 1997). Although all contexts and texts have their own relationships and features that can be specified at greater levels of detail, the differences between the spoken interaction and written texts analyzed in this chapter enable us to identify some register features that are particularly important for participation in interaction, on the one hand, and in the texts typical of schooling, on the other.

Field: Presenting Ideas

Chapters 1 and 2 showed that lexical explicitness is one way that the ability to use language successfully in school tasks is often characterized. Chapter 1 suggested that this “explicitness” should be seen not in cognitive terms, but in linguistic terms, as an ability to draw on lexical resources that are effective in particular contexts. Such ability requires knowledge of the social expectations of
the task as well as control of the range of vocabulary needed to construe meanings precisely. Explicitness, then, in these terms, is manifested through selections from the grammatical elements related to the construction of the field of discourse. The field of discourse, what the language is about, is closest to ordinary notions of what it means to use language effectively. Students know that they need to use the “right words” if they are going to demonstrate what they have learned (Schleppegrell & Simich-Dudgeon, 1996). Table 3.1 shows that what a text is about emerges to a great extent from vocabulary choices. At school, much vocabulary is subject-specific, contributing to text creation in particular content areas.

Texts (1) and (2) illustrate some differences in realization of the field variable in academic registers and interactional registers. Text (1) is an example of the kinds of text students read at school, a paragraph on sedimentary rock from a seventh-grade science textbook. The paragraph describes two ways, both involving water, that sedimentary rocks are formed.

(1) The formation of sedimentary rocks is closely associated with water. One type forms when water carries soil, pebbles, and other particles to the ocean floor where these sediments become rock. The second method involves chemicals dissolved in water. By evaporation and precipitation of substances like calcium carbonate, sedimentary rocks can form. (Morrison, Moore, Armour, Hammond, Haysom, Nicoll, & Smyth, 1993, p. 352)

Text (2), an excerpt from a group discussion of third-grade students, shows some typical features of an interactional register.

(2) Matthew: And um, like um sometimes if, um, like you think that the teacher? um, if you raise your hand and she says “No” so she'll pick on the

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4Of course speakers from different cultural backgrounds have different ways of constructing spoken discourse. The features analyzed here are intended to highlight differences between the ordinary ways of talking of children from mainstream backgrounds and expectations for the structure of school-based genres. The distance between academic registers and interactional registers in other cultural contexts can be assumed to be even greater.
peoples that don’t know it? so you raise your hand she picks you and you go “Well, I think, I didn’t, um, well.”

Boyd: I was just stretching
Cara: Gosh.
Matthew: Yeah

A little later:

Boyd: The other thing is, the teachers usually try to call on people that aren’t paying attention=
Cara: I know
Boyd: =which happens to me a lot.
Justin: And they surprise us.
Matthew: That’s what I said like the people raise their hand? and- and she- because they think they’re going to pick the person who don’t know it? and when she picks on you she says, . . . “Oh.”
Cara: I know, I used to do that.

**Lexical Choices.** Learning to use language in specialized ways is one of the challenges of schooling, and vocabulary choices that realize field are typically different in interactional and school-based texts. The lexis of school-based texts is often technical and abstract, as seen in (1), where the lexical choices identify it as a science text. Science texts depend on technical terms to make precise meanings. Text (1) draws on a technical lexis (*formation*, *chemicals*, *calcium carbonate*, *sedimentary rock*) to describe a geological process. Text (2), on the other hand, shows typical lexical choices for interactional texts, where lexis tends to be more ordinary and generic. Even the lexical terms that relate to schooling are non-technical and concrete (*teacher*, *raise hand*, *pick you*, etc.). This difference between the “everyday” and the “specialist” lexis is a major way that the language of academic texts differs from the ordinary interactional language of daily life.

Another way that field is construed is in the types of processes that different text types draw on. From a functional perspective, an English clause can include a *process*, typically realized in a verb or verbal group; *participants*, typically realized in nouns or nominal groups; and *circumstances*, typically realized in prepositional phrases or adverbs.\(^5\) An example of this analysis is provided at (3):

\[(3)\] In English, each clause may include a process, participants, and circumstances.

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Participant</th>
<th>Process</th>
<th>Participants</th>
</tr>
</thead>
</table>

\(^5\)Not every clause must have all three elements. A clause can consist of only a process (*Go!* ) or a process and participant with no circumstances (*They were studying.*).
Halliday (1994) describes six types of processes: material, behavioral, mental, verbal, relational, and existential. He shows how each type of process assumes a constellation of participants in the process and grammatical relationships between process and participants that are realized in different ways. A complete explanation of this way of analyzing clauses is beyond the scope of this book, but Table 3.2 shows examples of the six types of processes. Different registers draw on different constellations of processes as they realize different situational contexts. Research and pedagogical approaches that use the identification of different process types and show how they are functional for constructing different types of texts include Callaghan, Knapp, and Noble (1993); Christie (1998a); Drury (1991); Martin (1993b); Martin and Rothery (1986); and Veel (1999).

Comparing the processes in (1) with those in (2) shows how this kind of analysis illuminates differences between the situational contexts that these texts realize. Table 3.3 shows the different process types in (1) and (2). The differences in Table 3.3 are indicative of the kinds of processes that are typical of these two types of text, (1) and (2). In (2), the interactional discussion about events, material processes (raise, pick) construe the events, behavioral processes (stretching, paying attention) construe human behaviors, and verbal and mental processes (says, know) construe the saying and thinking of the participants involved, enabling Matthew to talk about the actions of the student and teacher and his feelings about them. An existential process (the other thing is) enables the introduction of a new topic. In (1), on the other hand, the author chooses material processes to describe the way sedimentary rock forms, and relational processes such as is associated with and involves to construct the scientific theory that explains this natural occurrence. These differences in the kinds of processes are typical of differences between the two registers, as interactional language more frequently focuses on individual actions and personal viewpoints, while the textbook presents information and constructs new understandings about the physical world. The more frequent use of relational processes, in particular, characterizes school-based registers, as chapters 4 and 5 describe more fully. Experimentally, then, texts realize the contextual variable of field through their lexical

<table>
<thead>
<tr>
<th>Process Type</th>
<th>What It Construes</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Processes of “doing”</td>
<td>Sedimentary rocks form in water.</td>
</tr>
<tr>
<td>Behavioral</td>
<td>Processes of conscious behavior</td>
<td>I was just stretching.</td>
</tr>
<tr>
<td>Mental</td>
<td>Processes of inner consciousness</td>
<td>I think the teacher knows about it.</td>
</tr>
<tr>
<td>Verbal</td>
<td>Processes of saying</td>
<td>She says she told you about it.</td>
</tr>
<tr>
<td>Relational</td>
<td>Relationships of description/identification</td>
<td>The second method involves chemicals.</td>
</tr>
<tr>
<td>Existential</td>
<td>Introduces new participants</td>
<td>There’s another thing . . .</td>
</tr>
</tbody>
</table>

TABLE 3.2
Processes in Functional Grammar
TABLE 3.3  
Process Types in Two Texts

<table>
<thead>
<tr>
<th>Material Processes</th>
<th>Text (1)</th>
<th>Text (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One type forms when...</td>
<td>If you raise your hand...</td>
<td></td>
</tr>
<tr>
<td>Water carries soil, pebbles...</td>
<td>She'll pick on the people...</td>
<td></td>
</tr>
<tr>
<td>These sediments become rock</td>
<td>Which happens to me...</td>
<td></td>
</tr>
<tr>
<td>Sedimentary rocks can form.</td>
<td>I used to do that</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behavioral Processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I was just stretching</td>
<td></td>
</tr>
<tr>
<td>People that aren’t paying attention</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mental Processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>If you think that the teacher...</td>
<td></td>
</tr>
<tr>
<td>People that don’t know it</td>
<td></td>
</tr>
<tr>
<td>They surprise us</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Verbal Processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>She says “No”</td>
<td></td>
</tr>
<tr>
<td>You go “Well, I think...”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relational Processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The formation of sedimentary rocks is closely associated with water.</td>
<td></td>
</tr>
<tr>
<td>The second method involves chemicals</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Existential Processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The other thing is...</td>
<td></td>
</tr>
</tbody>
</table>

choices, whether technical or ordinary, including the choice of process type and associated participants and circumstances.

**Logical Relationships.** Another important field variable is the realization of logical relationships within texts. The kinds of logical meanings that contribute to the realization of field include relationships of time, consequence, comparison, and addition. Differences between everyday, interactional registers and the registers that construe school-based texts can be illustrated in the way con...
junctons are typically used. Use of conjunctions is one of the options in the system of logical connection within and between clauses. In spoken interaction, conjunctions are a pervasive feature, and a few commonly used conjunctions can construe a wide range of meanings in this register (Schleppegrell, 1991). Occurring more frequently in speech than in writing, conjunctions construe generalized meanings in interactional discourse that require more specific choices in academic texts. This means that spoken discourse frequently employs a few commonly occurring conjunctions to realize a variety of logical links.

This can be seen clearly in (2), repeated at (4) to highlight how Matthew uses conjunctions to make logical connections in his explanation. Conjunctions introduce all but three of the nine non-embedded clauses in the first part of the explanation about raising his hand:

(4) (a) And um, like um sometimes if, um, like you think that the teacher?
    (b) um, if you raise your hand
    (c) and she says “No”
    (d) so she’ll pick on the peoples that don’t know it?
    (e) so you raise your hand
    (f) she picks you
    (g) and you go
    (h) “Well, I think,
    (i) I didn’t, um, well.”

Matthew begins his explanation at (a) with the clause “And um, like um sometimes if, um, like you think. . . .” He uses several conjunctions as he makes his point. The if marks the clause as introducing a hypothetical case, but the other conjunctions he uses suggest that what he is about to say is linked to previous discourse (and) and that it will introduce an example (like). The next segment (b)–(d), introduces a further hypothetical (if) clause describing what a student might do, followed by the next event in the evolving scenario, the teacher’s possible response, introduced with and and elaborated with so. At (e)–(g) Matthew then describes an instance in which a student does what has been described in (b)–(d), introduced with a causal marker (so) at (e), followed by the next event in the sequence (f), with the consequence of that event described at (g)–(i), again introduced with and. This frequent use of conjunctions to introduce clauses, typical of spoken discourse, illustrates two major functions of conjunctions in speech: to display generalized semantic meanings and to mark text structure with discourse markers (Schiffrin, 1987).

7This difference is also relevant to differences in mode, as shown below (since each clause simultaneously construes field, tenor, and mode, these linguistic variables are multifunctional), but here the focus is on the meanings that logical connectors construe.

8Embedded clauses function as constituents of other clauses, and so are not analyzed separately here.
In (2), only a few different conjunctions are used with generalized meanings. Matthew’s use of coordinating conjunctions, especially and, to link his clauses in this oral discourse is a major strategy for maintaining coherence in speech (Danielewicz, 1984). A study by Lazaraton (1992), for example, found five times more clauses connected by and in speech than writing. She reports that clauses connected by and in the narrative and comparison/contrast spoken texts she analyzes exhibit a wider range of meanings compared with the same genres of written texts. For example, sequence and addition are common meanings displayed by clauses connected by and in her spoken corpus, but not in writing, where other ways of marking these logical relationships are used. In (4), a variety of logical relationships exists between clauses connected with and; for example, the and at (c) links clauses that could also have been linked with but to highlight the adversative aspect of the teacher’s refusing to call on a student who “knows it.” In informal spoken explanations, the same conjunctions can construe different logical meanings, and the clauses they link do not necessarily display the explicit semantic relationship that is associated with the conjunction in a more decontextualized reflection on its meaning (see also Schleppegrell, 1991, 1992).

These variable meanings can also be illustrated by looking at one aspect of the linking relationships signaled by conjunctions; that is, whether the links are internal or external. Internal conjunctions signal logical relationships that construct the text as text, while external conjunctions signal logical relationships that are present in the world outside the text. Internal conjunctions can indicate speaker- or text-based links. For example, Martin (1992, p. 181) describes two environments for internal relations; in interactional exchanges, to mark challenges to moves or links between exchanges, while across a variety of text types, internal relationships help to mark the structure of the text. Internal conjunction reflects the rhetorical organization of text, or the speaker’s knowledge base or attitude, rather than relating events in the world (Martin, 1983, 1992). In (4), for example, Matthew’s like at (a) is an internal link that indicates he is presenting an example. The rest of Matthew’s explanation uses external conjunction to link a series of clauses that depict the scenario Matthew is presenting, a scenario that illustrates how a student might think the teacher would act in response to a student raising his hand. The conjunctions if, and, and so [(b)–(g)] are external links that introduce the conditional/causal logic that motivates the sequence of events. Internal conjunctive links construct the logical relationships between one part of a text and another, while external conjunctive links construe the logical relationships in the situation being discussed.

Conjunction and logical linking is an area of English grammar that varies considerably according to register. Both interactional and academic texts use internal and external conjunction, but they draw on internal conjunctive resources for different purposes. In speech, the same frequently occurring conjunctions can be used to make both internal and external links. In (5), for example, from the same children’s discussion, Matthew uses because both internally and externally:
(5) Well like I have a partner that hardly anybody likes because they make fun of her name because it's Halley like Halley's comet.

Matthew's first because introduces the evidence he uses to justify his statement that the other children don't like his partner. This because makes an internal link that introduces the reason Matthew can make the judgment he has made. His second because, on the other hand, makes an external link by explaining why the children make fun of Halley's name. Use of conjunctions to signal internal links, like the basis for Matthew's judgment, are typical of interactional registers. In informal conversation, conjunctions can carry less semantic weight, as intonation and interactional context contribute to the meanings that are made. This use of conjunctions does not transfer well to academic registers, however, where different grammatical strategies are expected when evidence is presented. This is one aspect of the challenge of reasoning in the ways expected at school.

In academic registers, a more varied set of conjunctions is used in more restricted ways. Conjunctions like however, furthermore, and nevertheless, for example, not typical of informal conversation, can link and mark the logical relationships between the parts of a text in academic registers. When conjunctions like because and but are used, they are generally expected to construe their core semantic meanings and not the range of meanings that they are able to make in informal talk. This means that students need to learn alternative strategies in school-based texts for realizing the logical relationships that they use common conjunctions for in informal speech. This is typically done through entirely different ways of casting sentences, involving different forms of clauses and clause combinations.

Logical relationships that are typically signaled by conjunctions in speech are typically realized in other ways in academic texts. Example (1) from the science textbook, reproduced here as (6), illustrates this, with the text separated into its finite, non-embedded clauses:

(6) (a) The formation of sedimentary rocks is closely associated with water.
(b) One type forms
(c) when water carries soil, pebbles, and other particles to the ocean floor
(d) where these sediments become rock.
(e) The second method involves chemicals dissolved in water.
(f) By evaporation and precipitation of substances like calcium carbonate, sedimentary rocks can form.

While in informal spoken discourse, logical connections are most often made with conjunctions, in academic registers, logical connections are more typically made through nouns and verbs (Halliday & Hasan, 1976; Martin, 1983). Here the causal links are made with nominal and verbal expressions (is closely associated with, forms, involves, by evaporation . . .). The conjunctive relationships are inte-
grated into the clause, rather than being expressed between clauses. Causal conjunctions such as because or so are not needed to make the logical connections.

These issues of discourse organization and clause structuring are taken up in greater detail below in the presentation of the textual resources of the grammar, where the implications of such conjunctive choices for the overall structuring of academic texts are illustrated. In analyzing how field is construed in informal conversation and school-based texts, then, the focus is on the experiential resources of nominal and verbal elements and on how resources that make logical connections are deployed. This focus illuminates how the language of schooling challenges students to draw on more specialized lexical and grammatical resources that enable them to reason in particular, valued ways.

**Tenor: Taking a Stance**

Tenor is the contextual variable that is realized in the interpersonal elements of the grammar. It is through choices from the interpersonal component that speakers and writers demonstrate their understanding of the role relationships inherent in each context and express their stance toward the texts they are creating. Academic language has different expectations from interactional language regarding presentation of self. In academic contexts, students are typically expected to project a noninteracting and distanced relationship with the listener/reader in their writing and formal speaking. Ways of presenting judgments and evaluation also differ in informal interaction and school-based texts. Certain grammatical and lexical features can be identified that construe different tenors as they make a text more or less distanced and authoritative in the way information is presented and evaluation is realized. This section contrasts the interpersonal features that are typical of the tenor of informal spoken interaction with those typical of the tenor of the texts students work with at school.

As Table 3.1 indicates, mood is a major resource for establishing tenor. Mood is the grammatical resource that helps realize interactivity and negotiation. English has three mood options, declarative, interrogative, or imperative, as illustrated in (7):

(7) Declarative mood: You are learning about functional grammar.
Interrogative mood: Are you learning about functional grammar?
Imperative mood: Learn about functional grammar!

Selection of mood is a choice that presents the language user as someone who states, questions, or commands, and each choice suggests a different relationship between speaker/listener or writer/reader. Dialogic conversation typically has varied mood structure, as speakers share information and question and urge each other to act. The typical mood choice in academic texts, on the other hand, is declarative, as the speakers/writers present themselves as knowledgeable providers of in-
formation. School-based registers typically do not emerge through the active interaction of interlocutors. While they also have elements that construe the speaker/writer’s awareness of audience, these are different from the give and take of conversational interaction, where interrogative and imperative forms are common.

This can be illustrated by a text that draws on the mood structure of an interactional register in an academic context, revealing the infelicity of the grammatical choices for presenting a reasoned position. Texts (8) and (9) are examples from a text written by a high school student who is responding to an essay by Wendell Berry (Berry, 1981):

(8) Wendell Berry thinks that escaping nature is what we seek for satisfaction, but how can that be so? Today, more than ever, there is a great demand for environmental engineers because there has been a tremendous increase of interest for the environment. Wendell Berry also believes that we dislike confronting with the sun, the air and the temperatures but if that were the case, then why do so many people insist in migrating to California? He also mentions, “Life will become a permanent holiday.” That is impossible! Even if high-tech machinery were invented, human beings would be needed to operate them.

(9) Let us not part from nature nor from technology, instead let us carry them both with us into the future!

In (8), the student expresses her disagreement with Berry through rhetorical questions which she answers briefly, with little development. In (9), she uses an imperative structure to appeal to her audience in a hortatory way. This essay construes a context of high involvement and emotional appeal, a dialogic stance that is not typically highly valued in the expository essay, where instead an assertive author is expected to present information in measured ways, and to use more subtle resources than interrogative and imperative structures to persuade others to adopt a point of view. Example (10) demonstrates how another student writer draws on academic register resources in expressing disagreement with Berry’s thesis:

(10) Although technology has caused many people to lose sight of their own capabilities and talents, we cannot overlook the medical advances and research possibilities that it has allowed us and still allows us.

---

9 The database from which this and other examples of responses to the Berry essay are drawn is described in more detail in chapter 4.

10 Of course the value of a hortatory style in an academic discipline depends on the particular discipline and its conventions. The essay from which examples (8) and (9) are taken failed to meet the expectations for academic writing of expert raters participating in holistic assessment of student writing for university writing course placement purposes. The writers of texts (10) and (11), on the other hand, were judged to be competent academic writers for placement purposes.
This writer takes a similar stance toward Berry’s thesis that the writer of (8) and (9) has, disagreeing with Berry’s view of technology, but the writer of (10) begins with a concession to Berry (the Although clause) and then brings out the points on which she will disagree. Instead of interrogative or imperative mood, she draws on the resources of modality in arguing that we cannot overlook what technology offers.

Modality is a resource for presenting propositions noncategorically, enabling the expression of degrees of probability, certainty, necessity, and other meanings. Modal verbs and adjuncts enable the expression of interpersonal meanings that construe the stance of the speaker/writer. Rather than expressing opinions starkly as the writer of (8) does (That is impossible!), the writer of (10) uses the modal choice cannot that makes this position a matter of inability and necessity, enabling her to state her position in a way that does not depend on a hortatory style that construes a context of argumentative interaction. The grammatical choices in (10) enable the writer both to concede a point and to challenge Berry’s ideas.

It is also possible to end an essay with an injunction about what should be done, as the writer of (9) has, but in a style that construes a less hortatory perspective. Text (11) illustrates this:

(11) My point is that satisfaction should not come from only working with nature, as Berry believed. People should get satisfaction from helping others, getting good grades, building new inventions, making people happy, etc. The list is endless. Satisfaction should come from accomplishing something useful.

Without making a direct appeal to the reader, as the writer of (9) does, the writer of (11) still presents a clear point of view and recommendation. Instead of the grammatical choice Let us, this writer uses the modal verb should to accomplish the purpose of suggesting what should be done. It is the lexical and grammatical choices that make a presentation appear more “reasoned.”

This is not to say that a rhetorical question or hortatory injunction is never appropriate in an academic text. But chapter 4 will show that a hortatory text has a different purpose from an analytical text, and adopting a hortatory stance when analysis is called for can result in a less effective text that can more easily be discounted. Although the well-placed rhetorical question can enhance an academic text, students who rely too heavily on dialogic features in their writing enact an interpersonal stance that may detract from the points they are making. In (12), for example, the student’s use of varied mood structure in rhetorical questions and exclamations, along with first person pronouns, gives the essay a tone of personal involvement:

(12) How come he also believe that unsatisfaction is achieved by people not doing the things we hate or don’t want to do? Is he telling me that I should work in a
cold or hot environment? Expose myself under the sun all day? or even expose myself to wind and rain. All these conditions inflict pain on the human body. The pain can be endure, but why would anyone chose too? For satisfaction? I believe not!

This writer’s disagreement with Berry’s thesis is construed as emotional and reactive. Eschewing the varied mood structures of conversational interaction and adopting the impersonality of third person declarative sentences requires that students understand how to use the features of academic registers to convey their feelings and attitudes at the same time that they present themselves as objective experts with information to communicate to others. The expectation for “reasoned” presentation reflects a value that is placed on arguments that are supported by evidence and presented objectively. Without controlling the grammatical resources that enable an argument to be challenged in the detached, rather than involved, style that is more highly valued in academic contexts, writers risk having their views dismissed as merely emotional reactions.

Developing writers are challenged to construe interpersonal meaning without being able to draw on intonation for this purpose. In spoken texts, intonation can construe interpersonal meanings that are not otherwise lexicalized. In (2), for example, Matthew’s intonation as he says “Well, I think, I didn’t, um, well” conveys all the embarrassment and chagrin that he felt during this episode. In academic texts, meanings are typically construed without drawing on this resource, so lexical and grammatical choices, along with some punctuation and formatting conventions, realize meanings that would be realized in intonation in spoken interaction.

Text (13), for example, taken from the same textbook as (1), shows how a text in an academic register can convey the attitudes and personal judgments of the author toward what is said in the absence of intonational cues:

11In addition to being a resource for construing interpersonal meanings, intonation can also help structure spoken texts. In spoken interaction, structure is often indicated prosodically, as clauses are chained, one after another, in an emergent style. In (2), for example, rising intonation, indicated by the question marks after teacher and know it help the speaker segment the explanation into its three major parts: the introduction of the topic (setting up the scenario); the outcome the student expects (that the teacher will choose someone who is not raising a hand); and what actually happens (the student raising his hand is nominated by the teacher). In school-based texts, however, information structure, like attitudinal meaning, is not typically indicated prosodically, but through lexical and grammatical resources.

12Academic tasks have their own expectations for prosodic contours, so intonational patterns do not convey the same meanings they do in ordinary conversation. Even where academic texts are spoken, the intonation expected is quite different from ordinary interaction. Collins (1987), for example, describes the reading aloud activities of elementary school students as having a distinctive staccato style. The prosodic patterns associated with sharing time episodes also realize a marked school register that has distinctive intonation patterns and involves slower and more careful enunciation than casual conversation (Michaels, 1986; Michaels & Foster, 1985).
(13) Many astronomers now believe that the radio sources inside quasars are objects known as black holes. The existence of black holes is more or less taken for granted by many astronomers, although no one has ever seen one. Black holes, if they exist, are in fact invisible!

A black hole, according to the theory, is the result of matter that has been super-compressed. For example, if the sun were compressed from its present diameter of 1,390,000 km down to a diameter of just 6 km, it would become a black hole. The gravitational attraction of such a heavy object would be so great that nothing, not even light, could escape from it. (Morrison et al., 1993, p. 444)

The author takes advantage of orthographic resources such as bolding, italics, and exclamation points to highlight terms and emphasize key points. This mimics the role of intonation in spoken language. However, this text has other features that realize interpersonal meaning in ways that are quite different from what is typical of informal speech. One aspect of this text’s meaning is the expression of tentativeness about the existence of black holes that pervades this selection without being explicitly stated. Although this text is about black holes, the author is not fully committed to black holes as a theoretical construct.

In order to grasp the full meaning of the passage, the reader needs to link the expression of doubt in the although clause (although no one has ever seen one) and the if clause (if they exist) with other signals of possible skepticism about the existence of black holes, realized in expressions including Many astronomers now believe, more or less taken for granted, and according to the theory. The cumulative effect of all of these is to raise questions about the existence of black holes. The point that black holes are in fact invisible is marked with an exclamation point, and students need to draw on the meanings of all of the linguistic resources used by the author in order to understand that astronomers might have doubts about the existence of black holes. The understanding that this is a theoretical construct and may not actually exist has to be gleaned through linguistic features that never make this point directly.

It is typical of written school-based texts that the writer often suggests interpersonal or attitudinal stances toward what is being presented without explicitly marking them as such. As in (13), interpersonal meanings important for comprehension of a text are often stated inexplicitly and draw on many areas of the grammar. An approach in the systemic functional linguistics framework that focuses on ways of construing evaluation is appraisal analysis (see, e.g., Martin, 2000; White, 2003). This approach identifies grammatical resources for making three kinds of interpersonal meaning: resources for passing judgments, resources for positioning the writer with respect to the meanings in the text, and resources for modifying the interpersonal force or focus of the message (see also Lemke, 1998, for more on the expression of attitudinal meaning). From the perspective of appraisal analysis, any element of the grammar can contribute to making these kinds of attitudinal meanings.
In (13), for example, the writer uses a variety of structural elements to construe an attitude toward black holes and indicate a position with respect to them (e.g., taken for granted, if they exist, in fact, according to the theory), as well as modifying the force of the assertions (e.g., many astronomers now believe, more or less). The fact that attitudinal meanings pervade a text, realized in nouns, verbs, adjectives, and clause constructions, means that interpersonal meaning, like international patterns in spoken language, is construed throughout the grammar, as the attitude of the speaker/writer toward what is being said or written is incorporated throughout the text.

Although valuable resources for interpersonal meaning in speech, such as varied mood structure and intonation, are typically not central to academic registers, attitudinal meanings are still always present. In school-based texts, attitudinal meanings emerge in modality and other resources for attitudinal meaning that are often implicit in the overall stance and judgments they construe.

**Mode: Structuring a Text**

The third contextual variable that is always realized through grammatical choices is mode. The choices for mode reflect the different ways that a text is presented and organized, related to the role that language plays in realization of the context of situation. Here there are major differences between the registers of informal spoken interaction and the registers of schooling, as texts participate in very different ways in these contexts. In informal conversation, the interlocutors are engaged in mutually constructing meaning, and the way the text is structured helps realize this co-construction. In academic texts, on the other hand, the meanings are built up as the text progresses without co-construction by an interlocutor. This requires different grammatical strategies. In either case, elements from the textual component of the grammar enable the speaker or writer to control the flow of information, repeating and emphasizing where necessary and introducing details and asides where appropriate. But different modes use different kinds of linguistic resources, or use the resources in different ways, to accomplish this. The resources for realizing mode that are considered here include cohesive devices, especially conjunctions, and their role in clause structuring, as well as thematic development and other resources for structuring information.

**Cohesion, Conjunctions, and Clause-Combining Strategies.** Cohesive elements are one set of resources for forming texts. Cohesion refers to the way that linkages are made in texts across clause boundaries (Halliday & Hasan, 1976). Reference is one resource for cohesion by which pronouns and deictic expressions such as this or that refer to elements in the text or outside of the text. Chapter 2 showed how these resources are typically used differently in interactional and academic contexts. In interactional contexts, they are often used exophorically, pointing to participants in the immediate context, where the situ-
ation disambiguates the referent. In academic texts, on the other hand, this and that are more often used endophorically to make links between segments of text. For example, in (14), (again from a response to the Berry essay) after a discussion about what satisfaction means, the student uses that to connect her next sentence to the previous text:

(14) That is what society must learn, satisfaction is not having success or money or things handed to you but suffering to attain them and learning from the experience.

This is different from the that that points to something in the external context; instead, it points to the previous text. Students need to learn to use reference in different ways as they work with school-based texts.

Conjunction is another resource for cohesion in texts. The discussion of field showed that the way logical relationships are indicated differs between interactional and school-based registers, as school-based texts less often use explicit conjunctive links and more often incorporate the logical relation in nominal or verbal elements. Here the focus is on conjunction more abstractly, as a strategy for realizing mode through the way the discourse is organized, where conjunctions themselves are only one means of creating links from one part of the text to another.

Some examples of the variety of ways that logical connections can be made in English text are shown at (15):

(15) (a) Rain ruined the picnic.  
(b) The picnic was ruined by the rain.  
(c) The picnic was ruined because it rained.  
(d) It rained. The picnic was ruined.

The connection between picnic and the rain can be expressed through predication (with a verb, ruined), through a minor predication (with a preposition, by), with a conjunction (because), or as two separate sentences with no structural relationship (Halliday & Hasan, 1976, p. 228; Martin, 1992, p. 164). The real-world connection is the same in each case, but the grammatical options represent different degrees of integration of the logical relationship into the clausal structure (see Martin, 1992, p. 164). With the two elements, rain and the ruining of the picnic as the central ideas, (a) is the most integrated expression of this proposition, with the participants and processes represented as the main elements of the clause. In (b), on the other hand, the actor (rain) is presented in a prepositional

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13The other cohesive resources discussed by Halliday and Hasan (1976) (substitution, ellipsis, lexical cohesion) are not dealt with here in any detail, but useful references on lexical cohesion and its development as an analytic tool through the analysis of cohesive harmony can be found in Halliday and Hasan (1989) and Hasan (1984).
phrase. In (c), the rain is presented as a verbal element in a separate clause, introduced by a causal conjunction (because). And in (d), the events are represented in two separate sentences, with no overt conjunctive link. The grammar of English provides different ways of expressing the same real-world relationships, with some ways of expression integrated into clause structure and other ways relying on conjunctions or other means of clause combining.

Differences in ways of reasoning, whether through conjunctions, prepositions, verbs, or nouns, are a key aspect of register differences. In academic texts, reasoning with nouns, verbs, and prepositions is typical. This is because the function of much school-based language is expository, presenting ideas that can be analyzed and interpreted. In academic texts the dense presentation of information means that more integrated logical relations are typically more highly valued. The emergent and co-constructed nature of informal spoken interaction, on the other hand, means that explicit conjunctions linking finite clauses are more common. Text (16) shows a typical conjunctive structure of academic registers.

(16) At one time, socializing and visiting with family and friends was a very common event. Our “advances” in communication have, in a way, set us back. The invention of the telephone has made it more convenient for people to talk with those that they cannot usually see and spend time with, but the telephone has also become a substitute for spending time with loved ones. Instead of getting everyone together and having a picnic or day together at someone’s house, the telephone has seemed to replace this. Many spend more time inside away from other people, talking on the telephone or watching television, rather than spending time outside enjoying nature and others’ company.

In (16), conjunctions are used primarily for noun phrase coordination, as in socializing and visiting with family and friends. Only one case of clause-linking uses conjunction, the but in the third sentence. On the other hand, a variety of logical relationships is still signaled throughout the text. The primary logical relation in this paragraph is contrast. Rather than joining clauses with but to signal this contrast, however, the writer uses at one time, instead of, and rather than to make the contrastive links. For example, in the sentence Instead of getting everyone together and having a picnic or day together at someone’s house, the telephone has seemed to replace this, the prepositional phrase instead of signals the relationship of contrast. In conversational interaction, the speaker might alternatively have said something like “We used to get everyone together and have a picnic, but the telephone has replaced this.” Other logical relationships are also expressed through verbs. For example, in the sentence The invention of the telephone has made it more convenient for people to talk with those that they cannot usually see and spend time with, the conjunctive relationship of cause is expressed by the verbal has made instead of, for example, the conjunction so (The telephone was invented, so it is more convenient . . .). These different choices result in texts whose overall structure and density of information vary considerably. A key challenge for students is to learn to
condense meanings in denser clause structures that incorporate logical relationships rather than stringing together one clause after another with conjunctions as they do in spoken interaction. This means learning the more restricted meanings for conjunctions as they are used in academic registers and alternative strategies for introducing the logical relationships that conjunctions offer.

Clauses can be linked with each other in different ways, and different clause combining strategies are functional for creating different kinds of texts. Creating interactional texts requires that speakers continually monitor information, often adding background or motivating circumstances as they proceed. An emergent organizational structure is achieved as speakers develop ideas and co-construct discourse with clauses chained by conjunctions. In academic texts, on the other hand, organization is more often hierarchical, with embedded clauses and nominal structures used to pack more information into each sentence. This variation in ways of combining clauses is part of the resources available to the speaker/writer for structuring information in a text.

Taking a functional approach to the different ways clauses can be combined means considering the way the clauses participate in the broader textual context. The categories “dependent” or “subordinate” and “independent” are insufficient in analyzing the different kinds of relationships between clauses and how clauses link with each other to form cohesive texts in speaking and writing. This is because the category subordinate clause includes two functionally very different types of clauses. Some subordinate clauses participate in discourse structuring; these are referred to as hypotactic clauses. Others function as a nominal group or part of a nominal group and do not make an independent contribution to discourse structure; these are called embedded clauses. Hypotactic clauses are dependent on but not constituents of another clause. They may be introduced by subordinating conjunctions such as if, when, or because as they are linked with a prior or subsequent clause. Embedded clauses, on the other hand, function within another clause; for example, as a postmodifier in a nominal group. We see this in a sentence from the explanation of black holes, reproduced at (17):

(17) A black hole . . . is the result of matter that has been super-compressed.

The restrictive relative clause that has been super-compressed is embedded in the nominal group that has matter as its head. This clause does not make an inde-

---

14In addition to hypotactic adverbial clauses like these, hypotaxis also includes clauses projected through verbal or mental processes (Halliday, 1994, p. 220). The rationale for this treatment of clauses following verbs of saying or thinking is given in Halliday (1994, pp. 250–273). He argues that such clauses are not in a constituent relationship, but rather in a logical dependency relationship. The relationship is paratactic when quoting directly and hypotactic when reporting (indirect speech). Such clauses are analyzed as embedded when they qualify a noun like report. For example, in The report that he was gone, that he was gone is analyzed as embedded; in He reported that he was gone, the relationship between clauses is analyzed as hypotactic, and in He reported, “I’m going,” the relationship is analyzed as paratactic.
pendent contribution to discourse structure, but instead functions as part of the nominal group. Other examples of embedded clauses are comparative clauses and nominalized clauses that function as subject or complement (Halliday, 1994, p. 242; Mann, Matthiessen, & Thompson, 1992).

In addition to these two types of subordinate clause, clauses can also be linked in a coordination relationship of *parataxis*. Paratactic clauses are linked to a prior clause with a coordinating conjunction or merely juxtaposed, and include direct quotations. Spoken interaction relies heavily on parataxis to link from clause to clause. This three-way distinction of clause linkages as paratactic, hypotactic, or embedded, distinguishes between clauses that independently contribute to discourse structure (hypotactic and paratactic) and those that function as part of another clause (embeddings).15

Different choices in clause structuring are characteristic of different registers, and result in differences in *lexical density* in informal and academic texts. Lexical density is a measure of the number of content words per non-embedded clause in a text (Halliday, 1994, p. 350).16 According to Halliday (1998), “the average lexical density for spontaneous spoken English barely exceeds two lexical words per clause” (p. 207). As Table 3.4 shows, the lexical densities of (1) and (2) differ considerably, with (1) more than three times as lexically dense as (2). Such a difference is typical of these two types of discourse (Halliday, 1993f). The more highly structured nature of school-based texts contributes to their lexical density. Through lexical density, academic registers pack more information into each clause, making it possible to build up the information in a text efficiently. Conjunctions, as a cohesive resource, contribute in different ways to interactional and academic texts, with a lesser reliance on conjunctions for clause linking and realization of logical connections and a greater use of embedded clauses in school-based texts that are more densely structured.

**Theme and Information Structuring.** Thematic development is another textual resource that contributes to organizational differences in texts. *Theme* is a construct of functional grammar that reveals how a clause in English is organized as a message. The theme of an English clause is the linguistic element that occurs first in the clause. It serves as the “point of departure” (Halliday, 1994, p. 37), or starting point, for the clause as a whole. The remainder of the

15 Other functional analyses also support this view (see, e.g., Chafe, 1985; Finegan & Biber, 1986; Matthiessen & Thompson, 1987; Schleppegrell, 1991; Thompson, 1984; Thompson & Longacre, 1985). Thompson (1984), for example, shows how adverbial, participial, and nonrestrictive relative clauses represent organizational options in the creation of texts, and in spoken discourse, are typically separate idea units or intonation units. Relative clauses, complement clauses, and clauses which are objects of prepositions, on the other hand, play a grammatical role in constituency with some noun, verb, or preposition and are typically part of the same intonation unit as the structure in which they are embedded.

<table>
<thead>
<tr>
<th>Text (1)</th>
<th>Text (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The formation of sedimentary rocks is closely associated with water.</td>
<td>1. And um, like um sometimes if, um, like you think that the teacher?</td>
</tr>
<tr>
<td>2. One type forms</td>
<td>2. um, if you raise your hand</td>
</tr>
<tr>
<td>3. when water carries soil, pebbles, and other particles to the ocean floor</td>
<td>3. and she says “No!”</td>
</tr>
<tr>
<td>4. where these sediments become rock.</td>
<td>4. so she’ll pick on the peoples that don’t know it?</td>
</tr>
<tr>
<td>5. The second method involves chemicals dissolved in water.</td>
<td>5. so you raise your hand</td>
</tr>
<tr>
<td>6. By evaporation and precipitation of substances like calcium carbonate, sedimentary rocks can form.</td>
<td>6. she picks you</td>
</tr>
<tr>
<td></td>
<td>7. and you go</td>
</tr>
<tr>
<td></td>
<td>8. “Well, I think,”</td>
</tr>
<tr>
<td></td>
<td>9. I didn’t, um, well.”</td>
</tr>
<tr>
<td></td>
<td>10. That’s what I said</td>
</tr>
<tr>
<td></td>
<td>11. like the people raise their hand?</td>
</tr>
<tr>
<td></td>
<td>12. and she- because they think</td>
</tr>
<tr>
<td></td>
<td>13. they’re going to pick the person who don’t know it?</td>
</tr>
<tr>
<td></td>
<td>14. and when she picks on you</td>
</tr>
<tr>
<td></td>
<td>15. she says, “Oh.”</td>
</tr>
<tr>
<td>Lexical density = 5.0 (30 content words in 6 non-embedded clauses)</td>
<td>Lexical density = 1.5 (24 content words in 15 non-embedded clauses)</td>
</tr>
</tbody>
</table>

clause is called the *rheme*; “the part in which the Theme is developed” (Halliday, 1994, p. 37). Different kinds of linguistic elements can serve as clause themes, as shown at (18), with themes underlined:

(18) Themes are often the subject of the clause.
But conjunctions can also be part of the theme.
Naturally, elements that contribute interpersonal meaning also occur first in the clause and contribute to the expression of theme.
In some clauses, prepositional phrases or other experiential elements occur in initial position and serve as themes.

In (18), themes are realized in experiential (*Themes, conjunctions, elements that contribute interpersonal meaning, In some clauses*), interpersonal (*Naturally*), and textual (*But*) elements. A full explication of the analysis of theme requires more space than is available here (see Halliday, 1994, pp. 37–67), but for the purposes of this book, theme can be identified as the elements up to and including the first experiential element at the beginning of a clause.\(^{17}\) In a clause beginning with a verb, the verb is the theme. When a clause participant is the theme, the whole

\(^{17}\)See Rose (2001) for discussion about how theme is defined and what is included in the theme of a clause.
nominal group is analyzed as the theme. Where conjunctions occur, they are also part of theme, as are interpersonal elements such as the adjunct naturally.

Analysis of the thematic structure of a text reveals the method of development in the text, as choice of the starting point of the clause indicates the perspective the speaker/writer is taking (Fries, 1981; Mauranen, 1996; see also articles in Ghadessy, 1995). Different kinds of themes indicate different approaches to the organization of the text and are also related to differences in register. Table 3.5 presents a thematic analysis of (1) and Matthew’s first turn in (2). The clause themes differ in the two texts. In (2), the themes of Matthew’s clauses are conjunctions and pronominal subjects, along with the Well that introduces his reported response to the teacher’s calling on him. These themes are functional for realizing the scenario that Matthew is developing, as the conjunctions scaffold the sequence of actions by the teacher and Matthew’s response. In (1), on the other hand, the author uses the theme position to progressively build an understanding of how sedimentary rocks are formed. The first theme, the formation of sedimentary rocks, presents the notion that sedimentary rocks form, and the further themes explicate the types of formations (one type; the second method). The theme of the where clause picks up the elements that were presented in the theme of the when clause (soil, pebbles, and other particles), calling them these sediments. Finally, the theme of the last clause, by evaporation and precipitation of substances like calcium carbonate, enables the author to elaborate the details of the second

<table>
<thead>
<tr>
<th>Theme</th>
<th>Rheme</th>
</tr>
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<tbody>
<tr>
<td>Text (1)</td>
<td></td>
</tr>
<tr>
<td>The formation of sedimentary rocks</td>
<td>is closely associated with water.</td>
</tr>
<tr>
<td>One type</td>
<td>forms</td>
</tr>
<tr>
<td>when water</td>
<td>carries soil, pebbles, and other particles to the ocean floor</td>
</tr>
<tr>
<td>where these sediments</td>
<td>become rock.</td>
</tr>
<tr>
<td>The second method</td>
<td>involves chemicals dissolved in water.</td>
</tr>
<tr>
<td>By evaporation and precipitation of substances like calcium carbonate,</td>
<td>sedimentary rocks can form.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme</th>
<th>Rheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text (2)</td>
<td></td>
</tr>
<tr>
<td>if you</td>
<td>raise your hand</td>
</tr>
<tr>
<td>and she</td>
<td>says “No”</td>
</tr>
<tr>
<td>so she</td>
<td>’ll pick on the peoples that don’t know it?</td>
</tr>
<tr>
<td>so you</td>
<td>raise your hand</td>
</tr>
<tr>
<td>she</td>
<td>picks you</td>
</tr>
<tr>
<td>and you</td>
<td>go</td>
</tr>
<tr>
<td>“Well, I</td>
<td>think,</td>
</tr>
<tr>
<td>I</td>
<td>didn’t, um, well.”</td>
</tr>
</tbody>
</table>
Academic registers often thematize noun phrases that condense prior information and present what has already been said so that further comment can be made about it, as shown above, where these sediments was picked up as clause theme. The creator of an academic text can exploit the functionality of theme for controlling the method of development of the text. An example of this is seen in the first two sentences in (13), presented at (19):

(19) Many astronomers now believe that the radio sources inside quasars are objects known as black holes. The existence of black holes is more or less taken for granted by many astronomers, although no one has ever seen one.

The second sentence begins with the thematic element The existence of black holes. This theme takes the information that was new in the rheme of the previous sentence, that there are objects known as black holes, and re-presents it as a nominalized element in the second sentence, as the point of departure for further discussion about black holes.

The theme of a clause is often also the subject of the clause, but the functions of subject and theme are not the same. In functional grammar, subject is the “element . . . on which the validity of the information is made to rest”; a nominal group “by reference to which the proposition can be affirmed or denied” (Halliday, 1994, p. 76). Subject is a useful construct for identifying the pivotal participants in a clause, but since not all clauses begin with subjects, incorporating the notion of theme in the grammatical analysis is a means of better understanding how information is structured in academic texts. Looking at clause subjects alone also reveals information about differences in the two registers, but not about the method of development. A comparison of the themes and subjects in texts (1) and (2) is shown in Table 3.6. As Table 3.6 shows, the subjects alone reveal the key participants, but it is the themes that show how the text is developing, as conjunctions and initiating phrases help scaffold the organization.

The interactional text, (2), relies heavily on pronominal subjects, while the academic text, (1), draws on lexical subjects. The subjects of (2) are pronouns, with the most frequent subjects you (a generalized third person singular pronoun meaning a person), she (the teacher), and I. Such choices, typical of interactional discourse, are described by Chafe (1986) as “light subjects.” They reflect the fact that participants in conversation typically engage in exchanges in which their clauses begin with a shared pronominal referent and add new information about

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18In the most highly developed of the academic text types, the scholarly article, Fries (1981) suggests that “. . . one tends to find complex arguments in which each successive idea is an expansion of and dependent on an idea in a previous sentence” (p. 9).
TABLE 3.6
Themes and Subjects in Two Texts

<table>
<thead>
<tr>
<th>Text (1)</th>
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</tr>
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<td>when water</td>
<td>so she</td>
</tr>
<tr>
<td>where these sediments</td>
<td>so you</td>
</tr>
<tr>
<td>The second method</td>
<td>she</td>
</tr>
<tr>
<td>By evaporation and precipitation of substances like calcium carbonate,</td>
<td>and you</td>
</tr>
<tr>
<td>sedimentary rocks</td>
<td>&quot;Well, I</td>
</tr>
<tr>
<td></td>
<td>I</td>
</tr>
</tbody>
</table>

Note. Subjects bold.

that referent in clause complements. Such pronominal subjects are often deictic elements (you and I) that point to conversational participants and create involvement. Various studies have confirmed that in conversation, pronominal subjects are typical (Chafe, 1992; Halliday, 1994; Scott, 1988). The subjects of the textbook passage, on the other hand, are lexicalized and include expanded nominal groups. The you and I that characterize interactional speech do not appear here, and lexicalized subjects appear instead. This text is not about propositions that hinge on you and me, but instead on the formations, types, and methods that are discussed in the textbook.

It is useful to distinguish between theme and subject in order to analyze the organizational structure and development of information in a text. In informal interactional texts, pronominal subjects often occur in theme position, and new information is increasingly built up in the clause rhemes. In academic texts, the author is challenged to progressively build an argument, summarizing and recapitulating prior discourse as each clause expands the discussion. For this purpose, the academic texts use noun phrases that condense given information as the point of departure so that further comment can be made. Information from the rheme of one clause occurs again as the theme in the following clause, contributing to the density of academic texts and to the kind of organization which is often described as more complex.

**Nominalization and Grammatical Metaphor.** Movement from the presentation of a new idea in the rheme of one clause to the re-presentation of the same information in the theme of a succeeding sentence is a feature of academic prose that typically involves nominalization. Nominalization is a process "by which verbs like tend, prefer, speak, refer, and use or adjectives like abstract become noun phrases that can then be the arguments of other verbs or the objects of prepositions" (Chafe, 1985, p. 108). A pervasive feature of academic and scientific texts, nominalization is the expression as a noun or noun phrase of what
would more naturally in spoken interaction be presented in another form (Martin, 1991). In (1), for example, the author takes the notions evaporate and precipitate and presents them in the nominalization evaporation and precipitation of substances, condensing what might otherwise be a lengthy explanation about this process into a single nominal element.

The dense structure of academic texts is partly a result of this nominalization. Nominalization “allows a lot of information to be packed into the Theme/Subject position which otherwise needs a whole clause to express” (Harvey, 1993, p. 36). This means that students have to process more ideas per clause in academic texts. Vande Kopple’s (1992) study of scientific research articles found that more than 80% of the total number of words occurred in noun phrases. As Ravelli (1996) points out, “Nominalisation is usually associated with other, related linguistic features including complex nominal group structure, with many pre and post modifiers, the use of embedded clauses, and lexical choices which are prestigious, technical and formal, rather than coming from a more everyday realm” (p. 380).

Nominalization is also a resource for grammatical metaphor, a construct of functional grammar that is key to understanding the nature of academic registers. Grammatical metaphor is the expression of concepts in an incongruent form (Halliday, 1994, 1998). Congruent expression refers to the “everyday” use of language, where, in a clause, “things” are realized in nouns, “happenings” are realized in verbs, “circumstances” are realized in adverbs or prepositional phrases, and relations between elements are realized in conjunctions. With grammatical metaphor, the choice of elements for these grammatical categories is incongruent, as other categories are used. For example:

(20) Congruent expression Incongruent expression
    (“everyday”) (“specialized”)
The telephone was invented The invention of the telephone
    (clause) (noun phrase)

In (20), the verb invent, naturally an action or process, has been reformulated as the noun invention. The term metaphor is typically used to refer to lexical metaphor, where the same term has different meaning in the metaphorical application (a piece of cake, for example, to mean an easy task). Grammatical metaphor, on the other hand, uses different wording to refer to the same meaning. What varies is not the lexical items but the grammatical categories (Halliday, 1998). Since grammatical metaphor is a linguistic process through which meaning is construed in the grammar in a form other than that which is prototypical, it is key to understanding the linguistic challenges of schooling. Through grammatical metaphor, “everyday” meanings are construed in new ways that enable the abstraction, technicality, and development of arguments that characterize advanced literacy tasks. Halliday (1993g) suggests that “as grammatical generalization is the key for entering into language, and to systematic common-sense knowledge, and gram-
matical abstractness is the key for entering into literacy, and to primary educational knowledge, so grammatical metaphor is the key for entering into the next level, that of secondary education, and of knowledge that is discipline-based and technical" (p. 111).

Halliday (1993d) demonstrates that the use of grammatical metaphor as a textual resource evolved in the context of scientific discovery. Scientists create technical taxonomies to distill the results of scientific inquiry into a set of nominal terms. Using these nominal elements, they can develop chains of reasoning, drawing conclusions from what they observe and presenting a line of argument that leads clearly from one step to the next. Using nominal elements enables the writer to present what would typically, or congruently, require a whole clause, in a nominal group that can be linked with another element that has been reconstrued as a nominal group. For example, (21) expands on the incongruent expression in (20):

(21) The invention of the telephone created many opportunities for enhanced communication.

Here created links the two nominal groups the invention of the telephone and many opportunities for enhanced communication. This grammatical metaphor through nominalization creates elements that can structure information in a text through their thematic placement.

Grammatical metaphor also involves other kinds of reconstruals besides turning processes into things. It also makes it possible for conjunctive relations to be realized as processes or circumstances, enabling reasoning to occur within rather than between clauses. Another, more “everyday” way of “saying the same thing” as (21), for example, might be Because the telephone was invented, there were many new opportunities for better communication. Here the conjunction because provides the causal link that is realized in the verb created in (21). As the earlier discussion pointed out, it is a common feature of school-based texts that the reasoning is done not with conjunctions, but with verbs or prepositions. Verbs can construe a variety of logical relationships within the clause, including causal (e.g., prevent, increase); temporal (e.g., follow); identifying (e.g., be, constitute); symbolizing (e.g., signal, mark), projecting (e.g., prove, suggest) and additive relationships (e.g., complement, accompany; examples from Halliday, 1998, p. 219). Grammatical metaphor, then, serves to recast everyday language in more specialized ways that realize the technicality and reasoning that characterize academic registers and enable the construction of theories and explanations.

The grammatical resources for realizing mode, then, as for field and tenor, are typically different in the registers of school-based texts and in ordinary spoken interaction. Different means are used to create cohesion and to combine clauses, as conjunctions play different kinds of roles in the different contexts in which these different kinds of texts are realized. The different ways of linking
ideas are also reflected in the kind of text structuring that is typical of these different modes. The method of development of a text, realized in thematic choices, reflects the different purposes that texts serve in interactional contexts and the contexts of schooling. A more condensed presentation of information in the texts that are typical of schooling draws on grammatical metaphor through nominalization and reasoning within the clause. Structuring texts in the ways expected in schooling challenges developing writers to draw on all these linguistic resources in new ways.

Summary

Analysis of the linguistic features of a text reveals the context of the situation where it makes meanings. Language used in interaction has features that help create a context of everyday meanings, familiarity, and negotiation, while language used for the tasks of schooling typically realizes contexts of information display, authoritativeness, and high degrees of structure. In school-based tasks, the language itself plays the major role in making meaning, so its resources have to be expanded beyond those resources needed for everyday interaction to take on the more technical and abstract meanings necessary for construing academic knowledge. This means that the language of schooling is organized in different ways from the language of everyday life.

In schooling contexts, the overriding features of the situational context are that students display knowledge authoritatively in highly structured texts. Table 3.7 summarizes the linguistic elements discussed throughout this chapter that are

<table>
<thead>
<tr>
<th>Table 3.7</th>
<th>Register Features of the Language of Schooling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situational Expectations (Context)</strong></td>
<td><strong>Grammatical Features (Register)</strong></td>
</tr>
<tr>
<td><strong>Display knowledge</strong></td>
<td>Ideational metafunction</td>
</tr>
<tr>
<td></td>
<td>Complex nominal syntax with specialized, technical and abstract lexis</td>
</tr>
<tr>
<td></td>
<td>Material and relational processes enable clause-internal reasoning with nouns, verbs, prepositions, instead of conjunctions</td>
</tr>
<tr>
<td><strong>Be authoritative</strong></td>
<td>Interpersonal metafunction</td>
</tr>
<tr>
<td></td>
<td>Declarative mood and modal verbs realize “reasoned” judgments</td>
</tr>
<tr>
<td></td>
<td>Evaluation often implicit through resources of appraisal</td>
</tr>
<tr>
<td><strong>Structure text in expected ways</strong></td>
<td>Textual metafunction</td>
</tr>
<tr>
<td></td>
<td>Clause-combining strategies of condensation and embedding</td>
</tr>
<tr>
<td></td>
<td>Theme position exploited to mark organizational structure</td>
</tr>
<tr>
<td></td>
<td>Nominalization and other forms of grammatical metaphor enable dense clauses</td>
</tr>
</tbody>
</table>
functional for these purposes, showing how the grammatical features are linked with the situational expectations that they realize in the context of schooling. From the ideational component of the grammar, school-based texts typically select complex nominal syntax that draws on technical and abstract lexis and processes through which logical meanings are instantiated. This realizes the field of schooling in its most general terms as a context in which texts need to be rich in information. The display of knowledge is realized through these grammatical choices. Selections from the interpersonal component of the grammar typically realize the “expert,” authoritative role of the student in the choice of declarative mood and use of modality and attitudinal resources instead of intonation to convey speaker/writer stance toward what is said. Selections from the textual component of the grammar realize the high degree of structure expected in school-based tasks, constructed through internal conjunction and other cohesive resources and clause-combining strategies of condensation and embedding along with effective exploitation of thematic position in the clause to highlight the organizational structure of the text through expanded noun phrases, nominalization, and other uses of grammatical metaphor.

These three areas of grammatical choice interact as writers/speakers create texts of different types. Although each metafunctional component has been discussed separately, it is important to remember that each clause simultaneously construes ideational, interpersonal, and textual meanings. Different lexical choices in the ideational component have grammatical implications for interpersonal and textual structure as well. And as the resources for interpersonal meaning realize different stances of the writer/speaker toward what is said, they also draw on different resources from the ideational and textual components of the grammar. Textual structure is likewise affected by the resources chosen for ideational and interpersonal meanings, as these contribute to different thematic structures and different ways of presenting information. In particular, grammatical metaphor, as a means of realizing the same kind of meaning in different parts of the clause, is a major resource for structuring texts through nominalization that highlights thematic structure and through reasoning within the clause that realizes logical meanings in verbs rather than conjunctions.

CONCLUSION

This chapter has focused on the linguistic differences between the language of informal interaction and the language that is expected in the texts of schooling, using the notion of linguistic register to illuminate the relationship between language and context. The differences in field, tenor, and mode that characterize different contexts are realized in the ideational, interpersonal, and textual resources of the grammar. These resources are called on by speakers and writers in different ways as they create coherent texts that are effective in realizing different purposes. It is through grammatical choices that different meanings are
construed and different contexts are realized, as the clause-level linguistic elements present information, enact interpersonal relationships, and structure texts in different ways.

This understanding of the nature of school-based texts has implications both for research and for teaching. In research on language development, it is important to focus on the linguistic features that are relevant for advanced literacy tasks when examining students' performance. In teaching, it is important to understand that students have to learn to manipulate the grammar in new ways in order to adopt the expected registers for their academic work. To reason in the ways expected in schooling, students need to develop strategies for organizing written discourse that are different from the typical organizing strategies of speech. This means learning the constellation of interacting grammatical and discourse features that realize the new situational context of schooling.

This chapter has looked at register differences only in very broad terms, identifying general differences between interactional and school-based texts. Chapter 4 shows how different grammatical strategies are functional for doing different kinds of tasks, even within the context of schooling. It looks at how writing develops and then explores the features of some genres of schooling in order to examine in greater depth the challenges that students face in trying to write academic registers.
4

Writing School Genres

[Learning is learning to mean, and to expand one’s meaning potential.]
—Halliday (1993, p. 113)

Chapter 3 described in general terms some features of the registers that are typical of schooling. This chapter reviews research that identifies these features as markers of students’ writing development and shows how the features participate in the texts of schooling. Using the academic register features described in chapter 3 poses challenges for student writers. Not only do they need to know the grammatical features to draw on, they also need to know when and how to use them effectively for different tasks in different contexts. This knowledge depends on experience with the contexts and purposes for which those features are functional as well as knowledge about the grammatical choices that realize the context and purpose. Although the focus here is on the grammatical choices, it is important to keep in mind that it is the social experience and opportunity to engage in purposeful uses of language that makes possible the understanding of how grammatical choices make the meanings.

Teachers and students work in contexts where a variety of types of texts are written and spoken, related to the demands of different levels of schooling and various subject areas. This chapter introduces the notion of genre to describe different kinds of writing tasks, using a broad distinction between personal, factual, and analytical texts (Martin, 1989a). As factual and analytical genres are often used for assessment and evaluation purposes in advanced literacy tasks, the chapter then focuses specifically on the expository essay, an analytical genre which is a key gatekeeping milestone as students move from one level of schooling to the next. The chapter describes the discourse and grammatical features that enable
the construction of an effective expository essay, and demonstrates how some students continue to depend on the registers of informal interaction in their academic writing.

**GRAMMAR AND WRITING DEVELOPMENT**

Students typically draw on the resources of the language they already know, the language of informal interaction, as they learn new ways of organizing and presenting language through writing. The academic register features described in chapter 3 emerge gradually in children’s writing, with the information-packed clause structure characteristic of academic registers only developing fully as children move into adolescence. Children’s early writing appears very much like their oral language, as they first construct chained clauses, using and and other generalized conjunctions of informal spoken discourse, before they learn to use the grammar and organizational structure typical of academic written texts (Kress, 1994). Research on children’s writing development from a grammatical perspective has focused on the movement from this chained, coordinated clause structure to the more condensed clausal structure typical of more mature writing. In this process, children first use only coordination, but then begin to incorporate dependent clauses, vary their sentence structure, and expand their vocabulary (Hunt, 1965, 1977; Lindfors, 1987; Scott, 1988; Weaver, 1996).

Hunt’s (1977) experiments in sentence-combining show these strategies developing as children’s writing matures. Hunt contrasts the writing of fourth-grade students and adults in terms of how they use conjunctions to combine six simple sentences into more complex structures. Representative examples of how the six sentences were combined by writers at different ages are shown in (1):

(1) 4th grader: Aluminum is a metal and it is abundant. It has many uses and it comes from bauxite. Bauxite is an ore and looks like clay.

   Adult: Aluminum, an abundant metal with many uses, comes from bauxite, a clay-like ore. (Hunt, 1977, p. 95)

The fourth grader uses and to connect each pair of the six sentences into a coordinated structure. The adult, on the other hand, combines all six sentences into one that has no conjunctions at all. Hunt (1977, p. 97) concludes that “successively older students can consolidate a successively larger number of simple sentences into a single T-unit” (a T-unit is “one main clause plus all the subordinate clauses attached to or embedded within it”; Hunt, 1965, p. 141). They do this by

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1Hunt (1965) analyzes compound sentences (with coordination) as separate T-units. The notion of T-unit gave him a better unit of analysis than “sentence” in looking at the highly coordinated texts of early writers and the oral language of children. The T-unit has been used in many studies of writing and language development.
reducing sentences to phrases or single words, using strategies of condensation which, as chapter 3 showed, are typical of academic registers.

The first clause combining strategy Hunt (1965) describes in children’s writing is coordination of T-units and predicates, starting at about fourth grade. He observes that fourth graders rarely transform predicate adjectives into prenominal adjectives, but as they gain experience, writers increasingly do this (e.g., *metal is abundant* becomes *abundant metal*), until, at about eighth grade, writers in his study use more prenominal than predicate adjectives. Young writers coordinate predicates, but coordination with ellipsis of subjects is rare at fourth grade, and increases with experience (e.g., *it has many uses and it comes from bauxite* becomes *It has many uses and comes from bauxite*). Eighth graders also use relative clauses (e.g., *There was a man and he was a singer* becomes *The man who was a singer, . . .*) and begin using appositives (e.g., *The girl next door, Staci . . .*) and nonfinite participles (e.g., *Carved from a pumpkin, the jack o’lantern . . . or Coming through the window, the burglar . . .*). Although he does not use the notion of grammatical metaphor, Hunt reports that it is only older writers who are able to readily make syntactic category shifts such as transforming predicates into modifiers (e.g., *The horse galloped* becomes *The galloping horse*) or transforming clauses into prepositional phrases (e.g., *an ore that has many uses* becomes *an ore with many uses*).

Children’s narrative and argumentative writing also shows significant decreases in causal and temporal conjunctions as they mature (Crowhurst, 1987). Crowhurst (1990, p. 203) finds that twelfth graders are more likely than sixth graders to use the kinds of conjunctive signals that signpost the development of an argument (*first of all, next, for one thing, all in all, finally*) and are more likely to use adversative conjunctions (however, but, whereas). Nelson (1988) finds that older students use fewer conjunctions because they express ideas more efficiently using verbs (again, the use of grammatical metaphor discussed in chapter 3).

As students adopt the registers of schooled writing, they also learn to present their opinions and attitudes in ways that are more authoritative, as the grammatical features of the academic registers enable a more reasoned style of argument. As Crowhurst (1990) describes it, “whereas much of the best writing at age 11 reflects the conventions of speech—as indeed, does weaker writing by 15-year-olds—able 15-year-olds have learned a good deal more both about written argument and about the text-forming devices of language. They have a variety of linguistic means at their disposal for conveying urgency and emphasis and have less need for the passionate personal statements and rhetorical questions of younger children” (p. 212). A distinguishing feature of weak writing is the presence of hedges, redundancies, restarts, vagueness, or ellipses that are acceptable in conversation (Horowitz & Samuels, 1987). Developing written academic registers means learning to make different lexical and grammatical choices than those that come naturally in interactional registers.

All of this research indicates that academic writing development involves movement away from the paratactic, clause-chaining syntax of speech, and toward the reduced clauses and high propositional content of the academic regis-
ters. Writers learn to pack more information into each clause as their writing develops. As successful children learn to write, they gradually become competent in adopting the structural and semantic properties of academic registers, coming to understand how language is structured differently when it is used in school-based tasks. They learn to compact clauses, expand their vocabulary, and present logical relationships in new ways, making the register choices that present them as effective academic writers.

This enables them to meet the discourse demands of the later years of education, which require the adoption of more academic ways of writing. Perfetti and McCutchen (1987) suggest that older children need to develop “productive control of lexical and grammatical devices” (p. 136). They point out that “it is not until writers reach a certain level of maturity that they even attempt to express many ideas . . . within a single sentence. It is that complexity, and the sophisticated syntax that it requires, that proves so problematic for many older writers” (pp. 133–134). They describe students who attempt to respond to the discourse demands of written language, but are unable to, because they are not able to draw on the grammatical features that express what they intend. As students are asked to accomplish more difficult and complex tasks, they have to draw on new grammatical and lexical resources. When lexical and grammatical development does not keep pace with school expectations, students are unable to meet the reading and writing demands of disciplinary learning.

Many of the students who have difficulty developing their writing to meet these academic register challenges speak English as a second language or second dialect. Students whose community language is a nonstandard variety of English have been shown to draw heavily on oral language features in their writing (Kutz, 1986; Shaughnessy, 1977; Whiteman, 1981), as have second language writers (Hinkel, 2002; Schleppegrell, 1996a). It is difficult to generalize about second language students, since they come from a variety of backgrounds, have begun learning English at different ages, and have different experiences of literacy in their mother tongues. The structure of their first languages and differences in their experiences also contribute to the variability of second language writing (Hinkel, 2002).

However, a review of 72 research reports comparing the composing processes and written text features of ESL and non-ESL writers finds that, in general, adult second language writing is simpler and less effective than first language writing (Silva, 1993). “L2 writers’ texts were less fluent (fewer words), less accurate (more errors), and less effective (lower holistic scores)” (1993, p. 668). Second language writers’ sentences included more but shorter T-units, fewer but longer clauses, more coordination, less subordination, less noun modification, and less

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2The composing processes are planning, transcribing, and reviewing. The written text features include fluency, accuracy, quality, structure (including argument and narrative), essay exam responses, use of readings, lexi-co-grammar, and reader orientation.
passivization. Second language writers also evidenced distinct patterns in the use of cohesive devices, especially more conjunctive and fewer lexical ties, and less lexical control, variety, and sophistication overall. These are the same features that are typical of the less developed first language writer.

Similar conclusions are reported in Hinkel (2002), who compares 68 linguistic features of texts by university level second language writers with those of native speakers in first year composition courses. She describes oral features in second language writing, including more use of conjunctions, especially causal conjunctions, exemplification markers, and demonstrative pronouns for establishing text cohesion, with few lexical ties. She links this functionally to her finding that second language writers provide personal stories rather than evidence for arguments in their essays, and concludes that these students “have a shortfall of syntactic and lexical tools to enable them to produce competent written academic text” (p. 160).

For those students with academic language experience in their first languages, it can be very frustrating to be unable to express themselves in English with the complex syntax and lexis that they can draw on in their first language. An even greater challenge faces the many immigrant children in today’s schools who have not had the opportunity to develop academic registers in their first languages. Even when they have achieved a good level of fluency in spoken English, they may have difficulty with academic language tasks. Similar challenges face speakers of nonstandard dialects of English, in learning the ways that academic registers construe meanings. Of course these different types of learners also differ in the challenges they face. Recently arrived second language learners have to learn a whole new grammar and lexicon, while immigrant students and speakers of nonstandard dialects may already control the spoken registers. The length of time that students may need to gain control of the surface grammar may also vary based on many factors, including first language, literacy background, and social experience, but on the whole, similar issues in writing development face second language learners, second dialect speakers, and other students without sufficient experience with academic contexts for language use. For all students for whom the notion of an academic register is not already familiar, learning to write is a great challenge, and a major aspect of that challenge is linguistic.

Although the studies just reviewed do not take a functional linguistics perspective on the features they analyze, their findings support a functional interpretation. Using the tools of systemic functional linguistics, Christie (2002b), for example, points out that use of adverbs emerges late in students’ writing, and suggests that this is because adverbs of manner and modal adverbs such as nearly and constantly are involved in the expression of judgments that develops as students mature. Christie (1998a, 2002a) describes the new aspects of literacy that

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3See Wald (1987) for an example of how high school students transfer knowledge about conventions of writing from Spanish to English.
are learned as students move into the more complex demands of secondary school, identifying the grammatical features needed for more advanced writing. She demonstrates how the use of embedded clauses and other means of expanding nominal groups is important for advanced literacy development because the kinds of texts that students are asked to write call for expanded nominal elements as themes that help to structure texts. The features of academic registers also enable students to construct the abstractions and generalizations needed for analytical writing. Christie (2002b) points out that the features she analyzes, including control of grammatical metaphor, “create the capacity in the successful writer, to handle the building of generalisation, abstraction, argument, reflection upon experience” (p. 46). But Christie (1998a) notes that these features are slow to develop, and that “development of control of many aspects of written language is a feature of late childhood and adolescence” (p. 69).

Christie’s research provides functional explanations for the findings of the other research reviewed here. Both structural and functional analyses suggest that to write in advanced literacy contexts, students need to draw on a constellation of grammatical and lexical features, including clause-combining strategies that rely less on conjunctions and finite clauses and more on embedded clauses and nominal and verbal expression of logical relationships. The functional analysis demonstrates how these developmental changes enable students to mean new things, construing the new kinds of knowledge that come out of the disciplinary demands of later schooling.

In order to understand these disciplinary demands, it is important to recognize the different types of texts that teachers typically ask students to read and write. The new knowledge and new ways of meaning that students are developing are realized in the particular genres of schooling. Grammatical and lexical features can effectively be a focus of attention only in the contexts of the texts in which they occur. Each subject has its own favored text types, a topic explored in greater detail in chapter 5. The next sections review the genres of schooling in general terms, and then focus on how academic registers are typically realized in one valued genre, the expository essay.

**GENRES OF SCHOOLING**

Genre is a term used to refer to particular text or discourse types. This section presents an overview of some genres of schooling in order to provide a framework for discussion of the key register features of academic texts. The description of the genres themselves should be seen as merely suggestive of the text types, as these are social constructs that are enacted in a diversity of ways. While the naming and description of a genre is in that sense arbitrary, as each genre may have infinite manifestations and is always changing and evolving, it is still useful to think about the properties of the prototypical texts that are associated with schooling
contexts. Language always construes both the commonality and the individuality of our social experiences, so the actual realizations of any genre are highly varied. At the same time, looking at texts from the perspective of the different genres they represent helps us understand the variability and development that is expected of students as they gain control of academic registers.

Genres come into being to serve specific social purposes, so ability to realize the genres that are characteristic of particular social contexts allows participation in and mutual understanding of those contexts. Because school is a culture with its own expectations for particular ways of using language, students need to learn about the genres of schooling and the purposes for which they are useful. They need to have experiences that engage them in activities for which different genres are expected if they are to gain a realistic understanding of their value and purposes. In addition to such experiences, however, students often need to focus explicitly on how those genres are typically constructed with the lexical and grammatical resources of the language if they are going to be successful in participating in such construction.

Defining the features of particular genres is problematic, as any one instance realizes the genre in ways that are not comprehensive or definitive of the genre as a more abstract notion. Genres respond to the cultural contexts in which they achieve their purposes, so their realizations vary and evolve as they are created in new ways in different contexts. But to understand the challenges of schooling, it is important to recognize that there are text types that students are expected to write, and that those text types are constructed with lexical and grammatical resources that are functional for making it the kind of text it is. Analyzing some genres that have been identified as relevant to schooling reveals the lexical and grammatical challenges.

Creating an instance of a genre means using language to move through a series of stages that are particular to that genre (Christie, 1985, p. 24; Halliday & Hasan, 1989; Martin, 1992). The narrative genre, for example, has been characterized as including the stages Abstract, Orientation, Complication, Evaluation, Resolution, and Coda as optional or obligatory elements (see Rothery & Stenglin, 1997, for discussion). Expository texts present a thesis and support it with arguments. The language used to realize these different kinds of texts can be analyzed to reveal what the linguistic challenges are in reading and writing the different genres of schooling.

4A genre is not the same thing as a "speech event." A speech event is an occurrence of a bounded episode which can include different genres or different choices of genre. For example, sharing time in the early grades is a speech event which is characterized by different genre possibilities, including narratives or descriptions. A genre also differs from a particular mode of communication. So, for example, an email message is not a genre; neither is a letter. Each of these modes of communication might be realized through different genres at different times for different purposes (an informal letter might consist mainly of recount or narrative elements; a letter to the editor might realize an argument).
Table 4.1 uses three categories proposed by Martin (1989a); Personal, Factual, and Analytical, to summarize the purposes and grammatical features of seven prototypical school-based genres: Recount, Narrative, Procedure, Report, Account, Explanation, and Exposition. The three categories refer to the general purposes of the genres: those that report on or create personal experience, those that present factual information, and those that analyze and argue. Table 4.1 describes the social purpose of each genre and indicates some of the grammatical features that research studies have found to be functional in realizing the genre.

Table 4.1 shows that different register features are functional for the realization of different genres. Each of the three categories of genres has its own sequence of development, and within each of the categories, there is an increasing demand for more academic register features as students move, for example, from writing recounts to writing narratives, or from writing procedures to writing reports, or from writing accounts to writing explanations and expositions. The increased grammatical demands emerge from the more complex stages that the more advanced text types include.

Christie (1998a; 2002b) proposes a developmental path in students’ ability to write in these different ways. She suggests that in the early primary grades, students typically write recounts, an early step toward the development of narrative (see Rothery & Stenglin [1997] for a full typology of what they call “story” genres). Recounts are re-creations of personal experience that are characterized by their use of personal pronouns and material processes to talk about activities and the participants in the activities; frequent use of conjunctions, especially additive and temporal conjunctions, to link clauses; and use of the past tense. (2) is an example of a rudimentary recount, written by a first-grade nonnative speaker of English:

(2) One day I played with my friends outside to played soccer. When we done to play soccer we cleaned up the house together. The house was beautiful. When we finish we go outside again to play soccer. I liked the fun day.

This text uses personal pronouns (I, we), material processes realized in past tense verbs (played, cleaned), and when, a temporal conjunction, to build the sequence of events in the text. Two evaluative clauses (the house was beautiful, I liked the fun day) point toward the assessment and evaluation that will develop in this writer as he gains skill in writing more complex narrative texts. Christie (1998a) notes that as students develop, they begin writing texts that not only recount an experience, but also draw implications from the experience. This requires a grammatical advance in order to make the link from the recount to the implication (using expressions such as and that shows, etc.), and a shift from past to present tense for the presentation of meanings that are timeless, not part of the recount of events.

These developments prepare students to write full narratives, texts that include problematic events and their outcome, with a complicating action that results in
<table>
<thead>
<tr>
<th>Genre</th>
<th>Purpose</th>
<th>Register Features</th>
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<tbody>
<tr>
<td><strong>Personal Genres</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Narrative</strong></td>
<td>Reports and evaluates problematic events and their outcome. Has a complicating action that results in an overall point to the story. Focuses on the action of participants in confronting problems.</td>
<td>Variety of process types and verb tenses for reporting past events and timeless generalizations. Pattern of participant roles changes, with more than one actor. Embedded clauses expand nominal groups. Conjunctive relations vary according to stage of the narrative. Adverbs introduce information about manner and express judgment about behavior. Themes mark passing time and help to structure the narrative. (Christie, 1986, 1998a; Rothery &amp; Stenglin, 1997).</td>
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<tr>
<td><strong>Factual Genres</strong></td>
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<tr>
<td>** Procedure**</td>
<td>Reports a sequence of events with general participants. Directions and instructions are subgenres of procedures.</td>
<td>Material process clauses. Timeless; simple present tense or imperatives. Directions tend to use declarative clauses in simple present tense with you/we/one as a generalized actor. Instructions use imperatives. (Martin, 1989a).</td>
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<tr>
<td><strong>Analytical Genres</strong></td>
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<tr>
<td><strong>Account</strong></td>
<td>Adds causal links to a recount; tells why things happened in a sequence.</td>
<td>Nominalization of events, relational verbs that realize causal relationships. (Coffin, 1997).</td>
</tr>
<tr>
<td><strong>Exposition</strong></td>
<td>Argues why a thesis has been proposed, with more than one argument presented in favor of the judgment. Relies on generalization, classification, and categorization.</td>
<td>Nominal expressions name the arguments to be used, drawing on abstractions. Modality presents claims as possibilities. Reasoning with nouns, verbs, prepositions, requiring subordination and condensation. Markers of contrast, classification, logical sequence. (Applebee, Durst, &amp; Newell, 1984; Christie, 1986; Coffin, 1997; Crowhurst, 1980; Durst, 1987; Martin, 1989a).</td>
</tr>
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</table>
an overall point to the story. Here a variety of verb tenses helps students move between various time and perspective changes, with a pattern of participant role changes and a variety of conjunctive relations and evaluative lexis. Christie (2002a) demonstrates the grammatical developments that occur as students move from simple recounts into the more complex narratives that draw on elaboration of circumstances, adverbs of manner, and use of grammatical metaphor to build experiential information in incongruent ways as writers incorporate complication and evaluation phases into their stories.

Procedure is a factual genre which is often written in the early years of schooling. It typically directs the actions of others through a set of steps. Giving directions, for example, creates a procedural text, often using declarative mood with present tense verbs to talk about generalized actions (e.g., you go to the top of the stairs and turn right . . .). Procedures may also use imperative verbs to direct the actions of others (Christie, 1998a; e.g., Take out a piece of paper and write your name on it).

In middle and secondary school, students write reports where they need to classify and describe. Here present tense is functional as writers make generic, rather than specific references. Text (3) is a description of a picture written by a middle school student that shows some features of the report genre:

(3) The egret is very large and slender. It fishes for food so his eyes in the picture look determined. The egret lives in the rain forest because it looks like that in the background of the picture. The egrets live on the Long Island coast’s. They use there long stiff beaks and legs to hunt there prey.

The writer of (3) begins her text with a nominal group that introduces what she is describing in a way that is generic (the egret) at the same time it refers to the specific picture she is describing. The clause themes maintain the focus on the generic egret, constructing the text as a report on egrets in general, with information about this bird presented in the clause rhemes. But the student also refers to the picture she is describing (e.g., in the picture and it looks like that in the background of the picture), so the text has features both of a report with a more distanced stance and a description more situated in relationship to the picture. It is common to see features of different genres and registers in the same text as students struggle to move into more academic ways of writing.

As students move into analytical writing, they write accounts, explanations, and expositions. Accounts are structured temporally, like recounts and narratives, but they also incorporate causal reasoning, as writers tell not only what happened, but why. A further step is explanation, where a phenomenon is presented and explained (How our government is structured, for example) without temporal sequencing. Instead, some kind of logical structure has to be developed in an effective explanation (There are three branches of government). Explanations draw on relational processes, technical language, and varied conjunctive relations. Ex-
pansion of nominal groups and more frequent use of circumstantial information goes along with these developments, making the control of a variety of types of clause themes important. In addition, a more authoritative voice emerges as the writer adopts consistent use of the third person (Christie, 1998a).

Moving beyond explanations, students write expository texts in which they argue for a position or weigh different views. The writer expands nominal groups and creates abstractions in order to name points to be developed and argued. A greater facility with clause organization strategies helps the writer reason with grammatical metaphor, a key resource for expressing causal relationships and attitudes in more condensed and objective ways. Modality helps to construe possibility and necessity, and logical and attitudinal connectors (however, nevertheless) are often used as themes to scaffold the argument. The next section of this chapter takes up these points in greater detail to describe how all these features together contribute to effective exposition.

The genres within each category in Table 4.1 share some features. The personal genres, for example, share the characteristic that they are temporally organized and report on specific events. This means that less organizational expertise is needed for personal writing such as recount or narrative, because the events themselves create a structure for the unfolding text (Kress, 1994, p. 79). The factual and analytical genres also include types that are organized temporally; in the case of factual genres, the procedure, and in the case of analytical genres, the account. But as students move on in schooling, they need to organize texts logically, rather than temporally, in order to present information or make claims and support them with judgments and evaluation. The genres of schooling become increasingly demanding in terms of the grammatical expectations that underlie them. In order to move from time-ordered, narrative modes of presentation, students need to be able to make changes in both the clause-level choices and discourse organization of their writing. Creating a text that presents and supports a thesis requires use of nominalization, internal linking, and other more advanced grammatical strategies.

Of course there are different ways of naming and describing these text types; terms like argument, discussion, and summary are also used as names of school-based genres. These genres are not presented here as templates, but as general descriptions of culturally expected ways of writing that are recognizable in the context of schooling. Some of these genres also appear as stages in other genres. In expository writing, for example, recounts of personal experience or reports of general information may form stages of the developing exposition. As students proceed through the levels of schooling, the kinds of genres they are expected to produce become more complicated, with exposition a target genre that is typically expected of the competent secondary school graduate. Because expository writing is such a key genre for success in schooling at advanced levels, the following section explores the expectations for expository writing in more
detail and presents some issues that face inexperienced students in accomplishing this genre.

**EXPOSITORY ESSAYS**

As students move to high school and beyond, they are expected to write expository essays, a genre through which writers present a point of view and support it with examples and evidence. It is expected to include a thesis supported by arguments why the thesis has been proposed (Martin, 1989a). This means that students need to be able to effectively introduce a topic, state a position or thesis related to the topic, incorporate or acknowledge the writing of others, and link ideas through text transitions (Gadda, 1991). They need to make generalizations that draw from their own experience and that of others. Judgments need to be justified with concrete evidence and examples as the writer adopts an authoritative stance, presenting him or herself as detached and knowledgeable. Inexperienced writers have difficulty with all of these aspects of exposition, and their difficulty is reflected in the lexical and grammatical features they draw on in writing their essays. This section demonstrates how features of academic registers contribute to the construction of an effective essay, and how developing writers who draw on features of interactional registers in their writing may fail to construct a valued text.

The expository essay is symbolic of students’ success with language at school, and often serves as an evaluation metric for acceptance at college or university and placement in a writing program. Most first year writing courses focus on developing students’ expository writing. Guidelines that have been developed by a major university system for evaluating the writing of incoming students (Gadda, 1995) suggest that both content considerations and language considerations are important. Students are expected “to provide reasoned, concrete, and developed presentations of their points of view” and demonstrate the “ability to control a range of vocabulary appropriate for beginning college students, to manage varied syntax accurately and appropriately, and to observe the conventions of standard written English” (p. 2). The expectation for “reasoned, concrete, and developed” essays echoes the expectations for authoritativeness in presentation of information and clear signals of text structure that are characteristic of academic registers in general. The linguistic features that enable students to create essays with these characteristics include elaborated noun phrases, technical and abstract vocabulary, relational processes that link nominal structures, effective use of logical connectors, and effective use of modal adjuncts and other resources for attitudinal meaning in the representation of their own and others’ views. In addition, strategies of information organization that draw on nominalization and embedding, along with effective use of clause themes, highlight the method of development of the text.
Developing writers have difficulty producing balanced expositions that are well-developed. In many cases, it is not the students’ ideas, but the way they are presented that makes their texts ineffective. Showing how their sentences, paragraphs, and larger units of composition are related as they elaborate and link the topics they introduce calls for lexical, grammatical, and discourse organizational strategies that effectively realize the development of their ideas. The variety of syntactic structures available in English allows the writer to present and develop positions, arguments, and explanations in different ways. Developing writers need to understand the discourse-pragmatic functions of different grammatical choices, and how particular elements can be used to introduce or emphasize information in their writing and to realize an authoritative stance. Students may know the grammatical features and still be unable to make effective lexical and grammatical choices for particular genres.

Exposition, or argument, is a difficult task, as noted by Crowhurst (1980): “it is clearly established that syntactic complexity is greater in argument than in narrative or descriptive writing.” She suggests that argument “is more cognitively demanding—in the location of relevant content, for example, and in the organization and logical use of that content. It characteristically uses linguistic forms not mastered early” (p. 229). She points out that “when individuals engage in persuasive or argumentative discourse, they are engaging in an activity which inherently requires the logical interrelationship of propositions” (p. 229), requiring subordination and the condensation of linguistic elements into subcusal structures. Crowhurst (1990) points out that many students do not know how to introduce cases and generalizations that support their claims. As she describes it, “compositions start and end abruptly; reasons are often not elaborated; some students respond with unexpected kinds of writing—narratives, dialogues, descriptions” (p. 218). Even after years of schooling, many students have not yet mastered the grammatical and lexical features that enable the presentation of a well-constructed essay. Although their ideas may be complex and sophisticated, the way they are presented can result in texts that do not meet academic expectations.

In this section, a corpus of 140 expository essays provides examples of how this genre is constructed by developing academic writers, both native speakers and second language students. These essays were written by high school seniors to determine their writing program placement as entering U.S. university students. The writers were asked to read and respond to a passage by essayist Wendell Berry (1981) in which he argues that “satisfaction” comes from hard work and that technology has taken the satisfaction out of much of the work we do today. Students were given two hours for this task, and the essays were handwritten and did not go through a drafting and polishing process. They were evaluated by experienced composition instructors who placed students in mainstream, developmental, or ESL writing courses based on students’ scores on a holistic 6-point scale. This section uses these essays to analyze the different ways that students re-
responded to the reading by Berry and the accompanying writing prompt. (For more analysis of this corpus, see Schleppegrell, 1996a, 1996b, 2000; Schleppegrell & Colombi, 1997.)

These particular examples, written on this particular topic, do not represent the full range of possible choices that writers might make in writing expository texts. Each example is just one instance that more or less approximates the structure of the genre described here and that draws in specific ways on the register features that are in focus. Such a corpus, then, is only suggestive of the various ways that writers may or may not meet expectations for academic register choices. But since the point here is to focus on the features of academic registers at a very general level, this corpus of student writing provides ample examples of the kinds of linguistic choices—both effective and less effective—that student writers make.

The first focus is on the macro-structure of the expository essay; how it is globally organized and the lexical and grammatical resources that are foregrounded at different stages. Then the focus turns to the grammar, to explore the ideational, interpersonal, and textual meanings realized in the students’ grammatical and lexical choices. The examples and discussion center on the grammar and structure because it is the grammatical choices that realize the “content” or ideas. The examples suggest that many of these students need to incorporate more relevant examples to support their points, or consider other issues that did not occur to them in the short time that they had to accomplish this task, but these content-related considerations are integrally related to the grammatical and lexical features. This perspective, looking at texts as a set of choices from the grammatical systems of English that draw meaning from the situations in which they are produced, the relationships they establish between writers and readers, and the forms they take, recognizes that knowledge is not separate from the language with which it is construed. Particular linguistic features enable a writer to construe the meanings and realize the organization that are highly valued in an expository essay.

**Macrostructure**

In an expository essay, the introduction announces the text’s orientation and purpose, typically in a thesis statement. In the body of the text, the thesis is developed and elaborated through examples and arguments. Finally, a conclusion summarizes and evaluates the points that have been made. The macrostructure of the essay, then, is a structure of foreshadowing, arguing, and summing up. At the same time, within each argument in the exposition, a similar kind of structure often occurs, where each argument is also announced with the evidence to be presented for it, and then presented, and then summed up. Martin (1996, 2002) shows how this structuring of a text depends on theme and nominalization as key grammatical resources for exposition.
Text (4) is an example of an essay that was considered by the expert readers who evaluated it to meet the requirements expected of a first year university student. In this essay, the student essentially adopts Berry’s (1981) thesis and supports it with examples from his personal life and his reading of *Brave New World*.

(4) According to the novelist, poet, essayist, and farmer, Wendell Berry, people should receive satisfaction from accomplishments, from completing a job and completing it well. Berry also thinks that people are already on their way to a world of “efficiency,” “production” and “consumption” with little satisfaction. I completely agree with Berry and have experienced both satisfaction from accomplishment and dissatisfaction from having a task done for me.

I personally have gained satisfaction from washing and waxing a thirty-six foot Motorhome. In the process I began to understand why the person paying me would rather have someone else do the job for them. The job was difficult and time consuming and made my body sore. Although it was hard work, once I was done, I felt proud. I could then step back and say, “I did that.” From this accomplishment, I received great satisfaction knowing that I did a job well done. Of course the question of whether or not my employer received satisfaction needs to be answered.

My father helped me with my science project in Junior High. I could have probably done it myself but I was too lazy and just thought of it as a waste of time. After the project was completed and ready to be presented, that feeling of accomplishment didn’t come to me. I was happy to have it done and out of the way but in no way did I feel satisfied. My employer most likely felt the same way. Happy to have his motorhome clean but not really having any satisfaction.

Science is now quickly coming up with new ways to make people happy with little satisfaction. As Berry pointed out in “Home of the Free,” “What these people are really selling is insulation—cushions of technology, ‘space age’ materials, and the menial work of other people—to keep fantasy in and reality out.” Another author that would agree with this statement is Aldous Huxley, the author of *Brave New World*.

In *Brave New World* Huxley uses William Shakespeare’s *Hamlet* to show that it is better “to suffer the slings and arrows” than to just remove them and not have to deal with them. Huxley also points out that “Happiness is never Grand” as compared to the struggling and overcoming of a difficulty and the satisfaction received. Huxley’s Novel is based on Berry’s same idea that this ‘World of the future’ is already established among us, and is growing.

In this “world of the future” satisfaction is becoming a thing of the past and is being overcome by what science says should make people happy and comfortable. I agree with Wendell Berry that true satisfaction comes from accomplishment and that both are being pushed out by scientific and futuristic com-

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5The essays in this corpus were read by expert readers to place students in appropriate courses for writing development during their first year at the university. Essays called effective in this chapter are those whose writers were placed in the regular first year writing course. Other students were placed in developmental writing courses or courses for second language students.
fort. People need to realize that satisfaction doesn’t come from removing anything considered uncomfortable or tedious. Only from accomplishing something for one’s self will true satisfaction come.

In the introduction to this essay, the student foreshadows what the essay will argue, suggesting that he will align himself with Berry’s point of view, using personal experiences of satisfaction and dissatisfaction to support this. How this student employs textual resources in the introduction to (4) is highlighted in the theme/rheme analysis in Table 4.2. Table 4.2 shows how the clause themes focus on Berry and I, indicating the student’s point of departure. The student begins with Berry’s perspective and his agreement with Berry. The clause rhemes, with new information, especially in the last sentence, point to the two major examples that the essay will use to justify the agreement. Note the use of nominalization and grammatical metaphor through nominalization for this purpose: satisfaction from accomplishment and dissatisfaction from having a task done for me. Nominalization makes it easier for the student to tell what the essay will be about, as the points can be named. The grammatical metaphor enables the compacting of information in the clause that will then be expanded and elaborated in the next paragraphs of the essay, where the student provides examples of the satisfaction and dissatisfaction that have been foregrounded in the introduction.

Text (5) shows how the student’s example of satisfaction from accomplishment in the essay at (4) uses a rhetorical organization that in some ways mirrors the macrostructure of the essay as a whole (foreshadowing, arguing, summarizing); again calling for different grammatical strategies at different stages.

(5) I personally have gained satisfaction from washing and waxing a thirty-six foot Motorhome. In the process I began to understand why the person paying me would rather have someone else do the job for them. The job was difficult and time consuming and made my body sore. Although it was hard work, once I was done, I felt proud. I could then step back and say, “I did that.” From this accom-

<table>
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<tr>
<th>Theme</th>
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<td>According to the novelist, poet, essayist, and farmer, Wendell Berry, people should receive satisfaction from accomplishments, from completing a job and completing it well.</td>
<td>Berry also thinks that people are already on their way to a world of “efficiency,” “production,” and “consumption” with little satisfaction.</td>
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<tr>
<td>Berry and (I) completely agree with Berry</td>
<td>I have experienced both satisfaction from accomplishment and dissatisfaction from having a task done for me.</td>
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plishment, I received great satisfaction knowing that I did a job well done. Of course the question of whether or not my employer received satisfaction needs to be answered.

In (5), the first sentence forecasts the point of the paragraph, introducing the “accomplishment” as a nominalized clause participant (washing and waxing a thirty-six foot Motorhome). This is a typical topic sentence, mirroring the way the introduction to the essay as a whole also foreshadowed what was to come. The second sentence uses a mental process (I began to understand) to introduce the evaluation that is pervasive in the paragraph as the student contrasts the pain of the hard work with the good feelings he got from it. The description of the actual experience of washing the motorhome draws on a more congruent (“everyday”) grammar to recount the experience (the job was difficult and time consuming; it was hard work) and evaluate it (I felt proud), with the pride illustrated in narrative clauses (I could then step back and say, “I did that”) that illustrate the feeling of accomplishment. This part of the paragraph uses simple linking with conjunctions and no nominalization. The evaluative language is explicit both in describing the hard task and in presenting the writer’s feelings about the accomplishment. But in summing up the paragraph, the student again uses the nominalized this accomplishment, and the satisfaction introduced in the first paragraph is reiterated, providing a cohesive link with what has been foreshadowed earlier. The less nominalized parts of the essay, using a grammar closer to the everyday, provide a contrast with the more abstract language used in nominalizing and summing up.

Text (6) is the concluding paragraph of the essay, where the student again draws on a more incongruent grammar:

(6) In this “world of the future” satisfaction is becoming a thing of the past and is being overcome by what science says should make people happy and comfortable. I agree with Wendell Berry that true satisfaction comes from accomplishment and that both are being pushed out by scientific and futuristic comfort. People need to realize that satisfaction doesn’t come from removing anything considered uncomfortable or tedious. Only from accomplishing something for one’s self will true satisfaction come.

The clause themes again show the method of development here as the student evokes Berry’s point with a quote from the Berry essay (In this “world of the future” . . . ), brings his own views in (I agree), and then adopts a hortatory stance in urging a particular perspective (People need to realize . . . ; Only from accomplishing something for one’s self . . . ). Complex nominal groups (what science says should make people happy and comfortable; anything considered uncomfortable or tedious) condense ideas that have been introduced earlier so that they can serve as clause participants in this concluding paragraph of evaluation. So the summing up of the essay also requires grammatical elements that condense information given in earlier parts of the essay.
Students are often asked to respond to something they have read with an expository essay that takes a position on the topic the author of the reading has introduced. This requires skills in reporting that author’s position and responding to it with well-developed arguments. Presenting a well-developed macrostructure that scaffolds that development depends on linguistic choices at the clause level. The register features that are expected in an academic text include complex nominal groups, embedded evaluative features, and strategies of condensation in conjunction and clause combining that create a highly structured text, with themes exploited to scaffold the organizational structure. Halliday (1982) points out that texts and clauses have similar properties, noting that “no one clause can recapitulate the whole text, but all contribute, and some achieve a remarkable likeness, because the systems of the clause embody all the semantic components from which the text is built in a way that allows infinite variety” (p. 230). Students need to make the choices at the clause level that will help them realize the highly structured texts which are expected at the discourse level.

**Clause Structure: Register Choices**

A functional linguistics approach can identify the challenges that developing writers face in making the grammatical and lexical choices that constitute an effective expository essay. Table 4.3, drawing on Jones, Gollin, Drury, and

<table>
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<tr>
<th>TABLE 4.3 Grammatical Features Functional for Expository Writing</th>
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<tr>
<td><strong>Ideational Resources that Display Knowledge</strong></td>
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<tr>
<td>• Abstract nominal groups that name arguments</td>
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<td>• Expanded nominal groups that condense information</td>
</tr>
<tr>
<td>• Verbs that link nominal structures to construct abstractions and generalizations</td>
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<tr>
<td>• Technical and abstract vocabulary used with appropriate collocations and transitivity structures</td>
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<tr>
<td><strong>Interpersonal Resources that Realize Authoritativeness</strong></td>
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<tr>
<td>• Declarative mood and third person to realize impersonality</td>
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<tr>
<td>• Nominalization and relational processes that enable evaluation</td>
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<td>• Resources for presenting stance, including control of explicit and implicit objective options for attributing commitment to a proposition</td>
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<tr>
<td>• Control of modality and other resources for attitudinal meaning</td>
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<tr>
<td><strong>Textual Resources that Structure Text</strong></td>
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<tr>
<td>• Thematic choices that structure information so that key points are highlighted</td>
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<tr>
<td>• Clause-combining choices that enable condensation of information</td>
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<tr>
<td>• High lexical density through grammatical metaphor</td>
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<tr>
<td>• Use of conjunctive resources to create cohesive links</td>
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<tr>
<td>• Resources for shifting from abstract to concrete in presenting and arguing for a thesis</td>
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Economou (1989), expands on the description of exposition in Table 4.1, listing linguistic resources that are functional for expository writing in terms of their roles in realizing field, tenor, and mode in ideational, interpersonal, and textual choices. The features of exposition presented in Table 4.3 are drawn from and expand to a greater level of detail the grammatical features of academic registers presented more generally in chapter 3 in Table 3.7. The following sections discuss the features presented in Table 4.3, using examples that illustrate the challenges developing writers face. The students who wrote these essays often draw on features of interactional registers, and these choices make their writing less effective in construing the meanings they intend. Drawing on strategies of informal spoken interactional language affects the logical structure and organizational structure of their essays, often resulting in infelicitous realizations of this writing task.

**Realization of Field in Ideational Resources.** Table 4.3 lists several grammatical features that enable writers to display knowledge as they construe ideational meaning. Technical and abstract vocabulary and the expansion of nominal elements enable the condensation of information needed for exposition. Of course vocabulary also contributes to the interpersonal realization of tenor through linguistic choices that provide evaluation, and to the texture of the essay as nominalization enables thematic development. In fact, all of the features of academic registers collaborate in the construction of the texts of schooling, as the three metafunctions are realized simultaneously in every clause. But a separate focus on each metafunctional component is a convenient way of analyzing the contribution of different grammatical and lexical choices to meaning making. This section looks in particular at the grammatical implications of lexical choices.

It is commonly understood that student writers have tremendous needs for vocabulary development, but a functional analysis adds a dimension to this understanding by focusing attention on the interaction of lexical with grammatical meanings. As students learn vocabulary, learning the grammatical contexts that lexical choices operate in is crucial for deploying expanded nominal groups and reduced clausal structures. The ability to expand a noun phrase with pre- and postmodifiers is an important resource for expository writing, as exposition requires expansion of the nominal group to create abstract participants in relational processes. For example, writing *His belief in its importance is a pervasive theme in this essay* instead of *He believes it is important* enables the writer to link two nominal structures in a relational process that incorporates the writer’s analysis with a report of what Berry says, in a single clause. Nominalization enables a writer to highlight a thesis, present arguments, and summarize conclusions. Nominal groups that name the arguments that will be used to support a thesis are particularly important. In (7), for example, after summarizing Berry’s point of view, a student writes:
Laziness and the demand for carefree products, foods, and housing prove his assumptions are correct.

Being able to present a thesis statement that lists the arguments that will be developed in the essay through these nominal groups (laziness; the demand for carefree products, foods, and housing) enables the writer to highlight the structure of the essay. In the rest of the essay, then, these points are further developed through examples and arguments.

The writer of (8) uses abstract nominalizations to present a thesis:

(8) The real folly of human nature lies in people's failure to realize the real value of the world that they live in and their constant fight to try and change it.

The writer has chosen a complex noun phrase, *The real folly of human nature*, as the subject of her sentence. Using the relational process *lies in*, she is then able to present two arguments that she will develop in her essay; that people fail to realize the true value of the world, and that they constantly try to change it. These arguments are presented as noun phrases. Three key nominal structures, *The real folly of human nature*, *people's failure to realize the real value of the world that they live in*, and *their constant fight to try and change it* enable the writer to present her thesis and name the points that will be used to argue for it.

Complex noun phrases are also useful for summarizing a point a writer has made. The writer of (9) has presented the notion that making a birthday card would be more satisfying than just buying one from a store. She then uses a nominal structure that sums up that point:

(9) Taking the time to do things yourself is a challenge and challenges always offer greater rewards.

By using as the sentence subject the nominal expression *Taking the time to do things yourself*, which captures the point the writer has already made, she can then go on in the same clause to provide the evaluation of that notion (*offer greater rewards*). It is this ability to make a point, condense that point into a noun phrase or expanded noun phrase which sums it up, and then evaluate that point, that enables a writer to realize the expository presentation valued in this genre. This depends on control of a range of vocabulary, including abstract vocabulary.

Expansion of resources for presenting relational processes is also important. Students need to learn a wide range of verbs that can help them construct abstractions and generalizations (e.g., *indicate, reflect, show, influence, cause, lead to*). Along with knowledge of words, however, students need to know the grammatical constraints on particular vocabulary choices, especially collocational information about the transitivity structures (certain kinds of subjects and complements) associated with particular process and participant types. Choice of a particular noun or verb brings with it expectations for the rest of the clause that
follow from that choice. A key issue for developing writers is understanding the grammatical implications of their lexical choices. The examples at (10) illustrate the kinds of problems with transitivity structure that often occur in student writing:

(10) (a) Realizing from personal experiences, Berry believed that the hard work and the time it took to complete the work doesn’t really matter as long as Berry and his helpers (neighbors, son, and daughter) gave some effort in completing his spring job.
(b) Berry’s point of view toward “satisfaction” does incorporated with what I thought of satisfaction.
(c) People will do anything to achieve their goals without concerning the safety of other species, their environment, and their life.

The transitivity restrictions on particular nouns and verbs mean that certain constructions are associated with particular lexical choices. The student who is unaware of these restrictions may be infelicitous in construing the intended meaning. In (a), the student uses realize without the necessary complement (realize what?); perhaps regarding this as interchangeable with an expression like Based on. This is a different kind of problem from the use of give in collocation with some effort, also in (a), where the expression is informal or colloquial (as is doesn’t really matter). In (b), incorporated with is ungrammatical, as incorporate in this context takes a nominal complement (e.g., Berry’s point of view incorporates many aspects that I also agree with). In (c), the student needs to learn the ways that concern can be used in this kind of clause structure (e.g., without concern for . . .).

The examples at (10) can be read over and mentally “edited” by someone familiar with such writing, but to be effective communicators, students need to develop good knowledge of word meaning and of the collocational and grammatical constraints on word use. The students who wrote these sentences are unfamiliar with the semantics and the clause structure associated with the particular kinds of subjects, verbs, and complements they have used. Both semantic and structural considerations are integral to any word choice, as the intended meanings may not be realized if the structure of the clause is ungrammatical. Students not only need a rich vocabulary, they also need to understand the grammatical implications of particular vocabulary choices. Vocabulary items that occur rarely in interactional registers are common in academic texts, and verb choices like realize, incorporate, and concern require transitivity structures that may be unfamiliar to students even when they know the vocabulary items.

This review of the ideational resources for expository writing demonstrates that developing writers need to expand their control of technical and academic vocabulary, but that effective use of the ideational resources of the grammar calls for more than just knowing words. To use the technical lexis correctly, writers need to understand the grammatical implications of their vocabulary choices and to adopt clause-structuring strategies that enable them to effectively organize
their expository texts. As the following sections show, adopting these strategies also enables the more effective construal of interpersonal and textual meanings.

**Realization of Tenor in Interpersonal Resources.** The interpersonal resources of the grammar, realizing the tenor of discourse, construe the relationship between reader and writer and the attitudes and judgments of the writer. Chapter 3 suggested that one of the challenges of academic writing is the embedding of evaluation so that the text sounds reasoned and authoritative. This means drawing on a different set of resources for evaluation than is typical of informal interaction. This section discusses some of the grammatical resources for realizing the authoritativeness that is valued in expository writing, outlined in Table 4.3, including declarative mood and third person to enable an impersonal presentation, strategies for removing the author from theme position in the clause and presenting authorial stance implicitly, and control of modality and other resources for attitudinal meaning.

Students writing in academic environments are typically expected to maintain an authoritative stance toward the information they are presenting. Making the register choices that enable the expression of this stance challenges students who lack knowledge of or experience using the grammatical resources that express authoritativeness. This is not to say that every expository essay necessarily presents an uninvolved, impersonal author. Different voices and styles are found in expository texts, and some styles of exposition are persuasive, challenging ideas and suggesting alternatives by expressing the writer’s attitudes explicitly. But different grammatical choices typify texts that are hortatory in this way. For example, the thesis in a hortatory text is typically a command, not a statement, and as hortatory texts offer suggestions and ask questions, they often use first person pronouns that treat the reader as participatory and interactive. Such hortatory texts are typical of editorials, letters to the editor, sermons, political speeches, and debates (Martin, 1989a). Analytical texts, on the other hand, try to persuade the reader that a thesis is well formulated without expressing feelings and attitudes explicitly. They are typically written in the third person and treat the reader as someone to be informed (Martin, 1989a). Writing an expository essay requires that students construct meanings and viewpoints without relying on the interaction of interlocutors for negotiation of meaning as they respond to a thesis that has been proposed by another author. Chapter 3 showed that overuse of imperative or interrogative clauses can realize a context of involvement more typical of interactional or highly hortatory registers. Students need to be able to recognize different styles and make choices that reflect their purposes, rather than drawing on familiar interactional register features without considering the consequences for the meanings they construe.

Other grammatical resources also contribute to the realization of authoritativeness in an expository essay. Students often have to present another author's
point of view, summarizing arguments that have been made and agreeing or disagreeing with those arguments in responding to a reading. The students writing the essays under analysis here have to summarize Wendell Berry’s position on what brings about satisfaction and then present their own perspectives on this topic. How they present their own and Berry’s views contributes in important ways to the authoritativeness they bring to this. The theme/rheme analysis in Table 4.2 showed how the writer of the essay at (4) used Berry or I in subject/theme position along with verbs like think and agree to introduce what Berry says and a response to the Berry essay. To further develop skills in expository writing, this writer will need to adopt an approach that uses themes that present a different point of departure for the clause; one that puts the focus on the information or views that are presented or challenged, rather than on the individuals responsible for those views. Text (11) is an example of this:

(11) Satisfaction of the state of our world today is an issue that everyone will probably never agree on. Many are not satisfied with the amount of work that is necessary to achieve something and we are constantly in search of ways to make everyday life easier. It is a common belief that if we find conveniences and ways to make life easier on us, then we will have a perfect world.

Table 4.4 presents a theme/rheme analysis of text (11). A comparison of the thematic choices in Table 4.4 with those in Table 4.2 shows that the clause themes in (11) are less personal and individuated than those used by the writer of the essay at (4).

The writer of text (11) uses a complex nominal group, Satisfaction of the state of our world today as the point of departure for the essay. This nominalization en-

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<td>Satisfaction of the state of our world today</td>
<td>is an issue that everyone will probably never agree on.</td>
</tr>
<tr>
<td>Many</td>
<td>are not satisfied with the amount of work that is necessary to achieve something</td>
</tr>
<tr>
<td>and we</td>
<td>are constantly in search of ways to make everyday life easier.</td>
</tr>
<tr>
<td>It</td>
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</tr>
<tr>
<td>that if we</td>
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</tr>
<tr>
<td>then we</td>
<td>will have a perfect world.</td>
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*Note that the clauses embedded as postmodifiers of a common belief are analyzed here to reveal the theme/rheme structure of the thesis the student presents.

*The collocation satisfaction of is infelicitous in the ways discussed in the previous section; however, this essay was considered effective overall by the expert readers who rated it.*
ables the writer to summarize the focus of Berry’s essay and link it in a relational clause with an abstraction (issue) that generalizes the point and allows the writer to comment on its arguability. Having begun this way, the writer can go on to expand on why “everyone will probably never agree.” Rather than presenting a personal perspective, using I, the writer again generalizes, pointing to the many who are not satisfied, and then construing the many as we. In the final sentence of the introduction, the writer adopts an impersonal structure, It is a common belief, to introduce a set of conditional clauses that present the perspective that is then discussed and critiqued in the essay.7

To effectively present their own and others’ points of view in the registers expected in academic tasks, student writers need to draw on nominal structures that name arguments and positions. Nouns like issue, belief, reason, problem, argument, point of view, and question are useful resources for this, as these nominal elements can be modified with adjectives such as significant, effective, and essential as writers evaluate opinions and arguments in clause structures that do not rely on references to one’s own beliefs (Jones et al., 1989). Using the nominal terms and impersonal constructions such as it is a common belief enables writers to report on their own and others’ views in a way that realizes a more impersonal stance (e.g., the author of this essay outlines, believes, or analyzes; can be cast as her outline, his belief, an analysis).

Halliday (1994, p. 355) suggests four ways that commitment to propositions, or what he calls “modal responsibility,” can be attributed. These four grammatical choices can be classified as explicit or implicit, objective or subjective. Examples are given at (12):

(12) (a) Explicit subjective: I think that Berry has a good point . . .
(b) Implicit subjective: Berry’s view should be accepted . . .
(c) Explicit objective: It is clear that Berry’s view is correct . . .
(d) Implicit objective: Berry is clearly correct in saying . . .

In each of these cases, the ideational meaning that is construed is similar, but the interpersonal meanings are different, as each of these choices presents the writer in a different relationship toward the reader and the text being evaluated. Option (a) presents the agreement with the author’s view as a projection through a mental process, explicitly indicating the writer’s subjectivity. In (b), the subjectivity is incorporated into the clause in a modal verb, making it less explicitly the viewpoint of the author. In (c) and (d), the judgment is presented as something objective rather than as an opinion; option (c) does this explicitly through the

7The use of theme analysis to reveal these differences in the way interpersonal meanings are construed here indicates the multifunctional nature of all of the linguistic resources as they simultaneously construe ideational, interpersonal, and textual meanings.
impersonal *it is clear*, while (d) incorporates the judgment into the clause through the modal adjunct *clearly.*

The status of each of these choices is clearly different, and different options are valued differently in different tasks and genres. In some contexts, the more objective choices are considered too impersonal, and the subjective options are preferred. But weaker writers tend to rely on the subjective options (a) and (b), either by using the explicitly subjective forms with *I* or by relying heavily on modal verbs, even in contexts where the more objective ways of construing these opinions are more highly valued (e.g., Hyland & Milton, 1997; Schleppegrell, 2002). Having control of the impersonal constructions can help writers present their views in ways that appear more objective, as shown in the examples at (13), from essays in this corpus judged to be effective:

(13) (a) It is disappointing to think that it will always be like this.
    (b) It is inevitable that the “future” way will grow and dominate our work,
        but one can always choose not to employ the gadgets of the future to do
        our bidding.

Rather than saying *I am disappointed*, or *I think the ‘future’ way will grow*, these writers have presented their views in more explicitly objective ways that help them present a more authoritative stance. Mental processes can be made impersonal by writing *it is likely, possible, usual, certain, or necessary* rather than *I think, imagine, guess, or suppose*. Verbal processes can be used to make assertions and claims so that these appear impersonal, as in *It is claimed that . . . or It can be said that . . . .* Modal adjuncts such as *possibly or certainly* can be realized in theme/subject position in order to construe evaluation in implicitly objective ways.

This is a difficult area of the grammar, as the linguistic choices that construe possibility, necessity, and other modal meanings are quite varied. These meanings can be realized in modal verbs, modal adjuncts, the impersonal constructions just discussed, and other elements of the grammar. For students from different cultural backgrounds, these options present a challenge in that they can reflect cultural values and norms in construing student’s varying ideas of what *may or should* be (Hinkel, 1995). Control over modality needs to be learned in contexts of use, where the teacher is clear about the meanings that the students are trying to express (Hasan & Perrett, 1994). Modal verbs, for example, are important resources for thesis statements (Christie, 1986), and non-use of modal verbs can indicate that there is no clear thesis or argument put forward. Examples of how students use modal verbs to make their claims are provided at (14):

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8When analyzing theme, a perspective can also be taken that treats clauses such as the *I think* in (a) and the *it is clear* in (c) as themes; interpersonal metaphors that project the points of view presented in the clauses they introduce (Halliday, 1994, p. 354ff; see also chapter 5).
(14) (a) People should be interested in working to achieve the end result, instead of taking short-cuts to get things done faster or easier.
(b) While it may be more productive to have scientific machines or other people do the work, it also takes away the values of work.
(c) Everyone must experience their own form of satisfaction.
(d) Contrary to popular belief, satisfaction can only come from working for it.

These essays go on to argue and present evidence about what should, may, must, or can happen.

Effective use of evaluative language is important for the expository essay, as it indicates that the writer is interpreting and arguing for a position. As chapter 3 showed, choices that construe evaluative and attitudinal meaning appear throughout the clause and contribute in major ways to effective (or ineffective) realization of register. This is a particular challenge for writers whose experience with English has come mainly through interactional contexts. The writer of (15), for example, produces a mixed register, with less formal, interactional choices co-occurring with structures that are valued in expository writing:

(15) In conclusion, satisfaction is to feel good and proud of your own accomplishment. To see the finish work of your own hand without advising or remote-controlling others. But like I said in the beginning, it’s alright to use machinery as a helping hand but don’t take advantage of that help. Nothing would makes you feel better than your own work. You have to sacrifice a bit of pain and suffering to achieve the goal, the goal of being proud and satisfy.

The writer begins the conclusion with the definition of satisfaction that has been developed through the essay. The stance is academic, as the writer uses a relational process with a nominalized infinitive clause as participant. The use of is as a verb is infelicitous, and an instructor might also suggest other improvements to this sentence, but the overall structuring of the clause shows an awareness of academic register features. But the register then assumes an interactional stance through expressions such as But like I said in the beginning, and the personal (you) and imperative (don’t take advantage of that help) address to the reader. The writer needs to further develop resources that will enable the realization of the more authoritative, impersonal stance valued in this genre.

Drawing on the grammatical resources that enable a writer to construct a text that realizes the authoritativeness expected in academic writing involves developing means for impersonal construal of evaluative meaning. These include nominalization and relational processes that enable generalization and evaluation, as well as control of various options for attributing modal responsibility. These ways of making meaning depend crucially on control of the more condensed clausal structure of the academic registers. This condensed clausal struc-
ture also draws heavily on resources from the textual component of the grammar, described in greater detail in the next section.

Realization of Mode in Textual Resources. Chapter 3 showed that there are various resources available for structuring information in the highly organized ways that are characteristic of exposition. Student writers need to be able to express their ideas in the nominalized, condensed structures of academic writing, rather than relying on the clause-chaining that is characteristic of informal interaction, where simple clauses with finite verbs tend to be linked with conjunctions and elaborated with adverbial clauses. As Table 4.3 indicates, textual resources for expository essays include thematic choices that structure information so that key points are highlighted, clause combining choices that enable condensation of information in the clause and result in high lexical density, use of conjunctive resources to create cohesive links, and resources for shifting from abstract to concrete as the writer presents a thesis and argues for it.

To produce a cohesive text, the writer needs to identify the point of the essay, establish and maintain a focus on a series of related points, and mark the structure of the argument as it develops. As discussed earlier, one feature of clause organization that can be exploited in the construction of a hierarchical argument is thematic structure. Through choice of clause theme, the writer can exploit word ordering options in English to highlight information structure and maintain a thematic progression.

For example, the author of (16) uses variation in word order to organize and highlight what she will argue in this introduction to her essay:

(16) “Home of the Free,” as presented by Wendell Berry, attempts to display the advantages and pleasures one can derive from “... the natural conditions of the world and the necessary work of human life.” From the aspect of a farmer, Berry shows how a life with hard work and dignity is more desirable than one with advanced technology and little self-fulfillment. American society’s trend toward efficiency and movement away from communication will contribute to man’s downfall. What may save man and “free” him from his own self-destruction is accepting the “hassles” of mortality. Ultimately, satisfaction comes from enjoying life, work, and people.

Table 4.5 displays the thematic choices, showing how the writer of text (16) uses a variety of types of themes to structure the clauses in her introductory paragraph in ways that highlight the points she will discuss. The first two themes name the Berry essay (“Home of the Free”) and the perspective from which Berry writes (From the aspect of a farmer). The rhemes of these clauses summarize Berry’s points, using the verbs attempts and shows to construct clauses with complex nominal groups. The nominalized themes in the third and fourth clauses then enable the writer to highlight the points this essay will take up. The nominalization American society's trend toward efficiency and movement away from communication
TABLE 4.5
Theme/Rheme Analysis of Text (16)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Rheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Home of the Free,” as presented by Wendell Berry,</td>
<td>attempts to display the advantages and pleasures one can derive from “...the natural conditions of the world and the necessary work of human life.”</td>
</tr>
<tr>
<td>From the aspect of a farmer,</td>
<td>Berry shows how a life with hard work and dignity is more desirable than one with advanced technology and little self-fulfillment.</td>
</tr>
<tr>
<td>American society’s trend toward efficiency and movement away from communication</td>
<td>will contribute to man’s downfall.</td>
</tr>
<tr>
<td>What may save man and “free” him from his own self-destruction</td>
<td>is accepting the “hassles” of mortality.</td>
</tr>
<tr>
<td>Ultimately, satisfaction</td>
<td>comes from enjoying life, work, and people.</td>
</tr>
</tbody>
</table>

enables the writer to use this complex idea as the theme and subject of her clause, allowing her to put into focus her point that this trend will contribute to man’s downfall. Her next sentence also takes advantage of English word order options, using as theme a noun clause that functions as a nominal group, *What may save man and “free” him from his own self-destruction.* This theme introduces the perspective that will be developed in the essay, that discomforts (*the hassles of mortality*) are a part of life. The lexical cohesion in the theme, with *destruction* evoking the *downfall* in the rheme of the previous clause, enables her to structure her points for greatest emphasis and impact. An interpersonal theme (*Ultimately*), along with the topical theme that names the central concern of the essay (*satisfaction*) introduces the last clause of this introduction, enabling the writer’s perspective to be the point of departure for the rest of the essay.

Drawing on the rheme of a previous clause for the theme of the next clause is a useful strategy for building an argument, as shown again in (17):

(17) The true satisfaction of work is not in the reward or price that one receives, but rather it is in doing a task that one loves to do. If one truly loves to do something, he will do it regardless of what others think or the conditions which he does it under.

The student picks up information from the rheme of the last clause in her first sentence, *is in doing a task that one loves to do,* and uses that notion as the point of departure for the next sentence, creating a cohesive link that moves the argument forward. Developing writers often have difficulty exploiting theme/rheme structure as an organizational tool. They do not build their arguments from clause to clause, increasingly re-packaging and re-presenting information as nomi-
nalized participants in the ensuing clauses. Instead, they often remain focused on
the same participant in a way that is more typical of narrative than expository
writing.

Clause-combining strategies also contribute to information structure, and the
ability to draw on a range of lexical and syntactic strategies contributes to the
writer's ability to structure an expository essay in ways that are valued. Different
clause-combining strategies result in very different discourse-organizational ap-
proaches to the essay writing task (Schleppegrell & Colombi, 1997). A tightly
constructed essay requires clause structure that enables the writer to present ideas
that are logically linked in obvious ways. Such a style draws on embedded clauses
and elaborated noun phrases. Without these resources, writers chain one finite
clause after another, creating an organizational structure which is more emer-
gent, as the writer moves from one idea to another. This more emergent style re-
results in an essay that may appear poorly planned and executed.

For example, the introductory paragraph of the student essay at (18) shows lit-
tle planning in its organizational structuring. The author does not state the bases
on which she will argue in her introduction, as might be expected, but instead in-
troduces each new point as her essay develops. Excerpts from this essay were pre-
sented as text (8) in chapter 3 to show how the student's grammatical choices in
mood structure construe a context of informal interaction. Here, in looking at
her entire introductory paragraph, it is clear that her clause-chaining structure
also contributes to the hortatory, personal style.

(18) “What we want to be set free from are the natural conditions of the world and
the necessary work of human life,” is not true. Wendell Berry thinks that es-
caping nature is what we seek for satisfaction, but how can that be so? Today,
more than ever, there is a great demand for environmental engineers because
there has been a tremendous increase of interest for the environment. Wen-
dell Berry also believes that we dislike confronting with the sun, the air and
the temperatures but if that were the case, then why do so many people insist
in migrating to California? He also mentions, “Life will become a permanent
holiday.” That is impossible! Even if high-tech machinery were invented, hu-
man beings would be needed to operate them. Another argument is that if he
disagrees with the new, improved machinery that John Deere has to offer and
if he so much loves working out in the field, under the sun, in the hot
weather, then I suggest he cancels the use of tractors and goes back to working
with the same farming-equipment our ancestors used, one upon a time.

This student does not identify the arguments she will use in her essay and organ-
ize this paragraph to bring those to the reader’s attention. Instead, she moves
from point to point in responding to each of the issues she raises with a rebuttal
based on little evidence. The syntactic structures she draws on for this paragraph
realize this hortatory style. This becomes clear when this example is compared
with that of a student who adopts a more academic register in disagreeing with
Berry. This text is presented at (19):
Berry's view of satisfaction does not fit the views of growing trends. His views also causes inefficiencies which a successfully thriving civilization cannot afford to have. With the development of technology, more efficient productivity provides more time and energy for us to further use our skills and creativity instead of wasting it in drudgeries such as “manure hauling.”

Although this example shows some grammatical infelicities, the clause structuring choices are functional for presenting information in an organized way that makes links from one point to the next. A comparison of the last sentence of (18) and the text at (19) highlights the different approaches. The last sentence of (18) is composed of 61 words and eight clauses, chained together with the conjunctions if, and if, then, and and. On the other hand, the writer of (19) presents 58 words in three sentences with a total of only four clauses. With a similar number of words and half the number of clauses, the writer of (19) also argues that Berry’s views are not in line with modern life, as more efficient production technology enables us to accomplish more than was possible using the old technology that Berry praises. By using prepositional phrases and non-finite clauses, the writer is able to employ a clause structure that indicates greater familiarity with academic register expectations. The clause-chaining style of (18), evocative of oral language, does not create for the reader the context of a knowledgeable expert, authoritatively providing evidence to support a point of view. Nor does it reflect an organization of information that moves from a general point to specific support for that point.

Nominalization also contributes to the denser clause structure of (19). For example, while (18) tells us what Berry thinks (Wendell Berry thinks; Wendell Berry also believes), (19) refers to Berry’s view of satisfaction and His views. This means that the writer of (19) can use the same clause to present and evaluate Berry’s views, integrating nominalizations into clausal structures where the condensation of information they realize can be exploited, as is seen in (20), where sentences from (18) and (19) are presented for comparison:

(20) (a) From (18): Today, more than ever, there is a great demand for environmental engineers because there has been a tremendous increase of interest for the environment.

(b) From (19): With the development of technology, more efficient productivity provides more time and energy for us to further use our skills and creativity instead of wasting it in drudgeries such as “manure hauling.”

In (20)(a), the writer uses two clauses, both introduced with existential processes (there is; there has been) and linked by the conjunction because, in order to show how the great demand has been caused by the tremendous increase. In (20)(b), on the other hand, the writer has used the clause structure that is a hallmark of more academic registers in English, with a thematic prepositional phrase and the gram-
matically metaphorical nominalization more efficient productivity participating in a material process clause whose complement is an elaborated nominal group expanded with prepositional adjuncts (for us to further use . . . ; instead of wasting . . .). While (20)(a) also uses grammatical metaphor (a great demand for environmental engineers; a tremendous increase of interest for the environment), the clause structuring does not draw on options for clause integration by reasoning with grammatical metaphor (e.g., a tremendous increase in interest in the environment has led to great demand for environmental engineers; where the realization of the logical relationship is grammatically metaphorical rather than through the conjunction because).

The choice of logical connectors and other conjunction strategies affects both ideational and textual meanings. Developing writers often rely on conjunctions for clause linkage, as their use of the conjunction because demonstrates. Essays in this corpus written by students identified as second language writers have twice the number of because clauses as those written by other students. Chapter 3 showed how second language writers often use because clauses in ways typical of interactional registers, contributing to an informal oral tone in their essays.9 Another example of this is (21):

(21) My goal wasn’t considered to be extremely difficult because it was to clean up my backyard which included mowing and raking the lawn.

In (21), the writer uses the kind of reasoning that is knowledge-based, with because used to make an internally conjunctive link, reflecting the author’s reasoning process rather than events in the world. The reason that the goal wasn’t difficult is not because the goal was to clean up the backyard; instead, cleaning up the backyard is an illustration of the goal and evidence for its lack of difficulty. This is a typical way of speaking, but it does not work well in a written register, where it can sound illogical or poorly reasoned. Students who produce such sentences need new strategies for introducing their judgments and assessments, and may benefit from recognizing that they are using forms that are less effective in academic writing than in informal interaction.

Alternatives to explicit conjunctive links require that students learn strategies for producing denser, more integrated texts through condensation of information in the nominal group. Such strategies of academic writing often elude developing writers, who frequently rely on adverbial clauses to express ideas for which more proficient writers tend to use nominal structures. We can see how this manifests itself by comparing excerpts from two student essays, one judged ineffective by

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9Goldman and Murray (1992, p. 517) suggest that second language writers tend to overuse causal connectors due to the “imprecise” use of causal connectors such as so, thus, and because in “conversational English,” where these terms may be used in situations in which a relationship other than cause and effect is being discussed. They find the greatest overuse of the causals by “those students whose dominant experiences with English have been in informal, conversational contexts.”
the expert raters, and one judged effective. The ineffective writer uses *because* four times in the 78 word passage at (22):

(22) When I lived in Mexico City, I had to carry buckets of water *because* there was no water at home. My mom had to wash our clothing by hand *because* we did not have neither a washing machine nor a dryer. Some people had to go to the market every day to buy fresh groceries *because* they did not even have a refrigerator. They used a little fire place as a stove *because* they did not have one.

Contrast this with (23), which shows how the more effective writer accomplishes a similar narrative portion of an essay without *because* clauses.

(23) Throughout my life, I have learned the value of hard work from myself, the people around me and my own accomplishments. My father, especially pointed out that he worked hard to get where he is now. He told me of his life in the Philippines,—the back-breaking work of hauling sugar canes by hand and later his struggle through college juggling a late night job and school work. He described that many nights he received no sleep at all due to a long night at the theater where he worked and early morning classes.

In (23), the father’s work is described in a series of nominal structures: the *back-breaking work*; his *struggle through college*. The writer of (23) is using syntactic strategies that allow for condensation of information, rather than stringing clauses together more loosely by relying on adverbial *because* clauses, as the writer of (22) does. The writer of (22) links finite clauses with the conjunction *because* rather than integrating the information in both clauses through nominalization and embedding, as the writer of (23) does. By using nominalization and embedding, the more academic writer is able to pack more information into denser clauses, rather than stringing together finite clauses which maintain their own independent structure.

Use of grammatical metaphor in this way correlates with high lexical density (Drury & Webb, 1991). While (22) has 23 content words in nine clauses, averaging 2.6 words per clause, (23) has 38 content words in eight clauses, averaging 4.8 content words per clause. Chapter 3 showed how lexical density, expressed as the number of content words per non-embedded clause, is typically higher when students integrate information into nominal or embedded structures instead of using adverbial clauses to provide causal or other kinds of linkages.

Condensation of information does not come easily to student writers. The introduction to this chapter showed that the developmental process of learning to use these ways of writing is long even for native speakers. The deployment of the conjunctive resources of the grammar and use of grammatical metaphor is key to control of these features. Developing writers need to learn to embed the conjunc-
tive link within rather than between clauses, using nominalization to present information in condensed clausal structures.

When students do use conjunctions, they need to use them in ways that help them structure and expand on the information they are presenting in their essays. As cohesive resources, conjunctions enable linking within a text. Text (24), for example, shows how a because clause introduces information which is cohesive with prior discourse:

(24) I agree with Berry that “satisfaction” comes from working with your hands. There are many things that I have to do that don’t really give me pleasure or a sense of satisfaction when its done, because it required little manual labor.

Lexical cohesion is created by the synonymy of manual labor in the because clause and working with your hands in the prior sentence. Because clauses can also introduce cohesive ties that operate in a forward-looking direction, as the because clause introduces a new topic which is then taken up in subsequent discourse. Text (25) shows how a new topic introduced by a because clause is elaborated in the following discourse:

(25) In our attempt to do this, we tend to forget the reason we were really put on this planet because we get so caught up in “improving our world.” Are our actions really improving our world?

This writer uses a because clause to introduce an idea, improving our world, which is then taken up in the next part of the essay. Sometimes the information in the because clause is elaborated in the next sentence, as in (25). At other times the new element becomes a broader discourse topic, as in (26):

(26) By touching a button here, signing a contract there, today’s logic has it that life will automatically become a fairy tale. These temporary satisfactions are offered by advertisers because there is a demand in society for them.

Berry points out that society feels the need to buy its satisfactions in order to feel a forced pleasure.

In (26) the writer uses a because clause at the end of a paragraph to introduce an idea which then is taken up at the start of the next paragraph, where the demand in society mentioned in the because clause is further elaborated. The introduction of a new discourse topic often motivates text segmentation (Giora, 1983). Here, the because clause introduces a new topic which then becomes the focus of the next segment. The sentence-final position of most because clauses facilitates this introduction of new information, as new topics can be introduced in because clauses and then further elaborated in subsequent discourse. In providing cohesive links and introducing new topics, because clauses can assist writers in highlighting important points and structuring and organizing discourse.
Although developing writers draw heavily on conjunctions, at the same time, they use them less often to make cohesive links (Schleppegrell, 1996b). Developing writers often fail to expand on the points they make and they have difficulty maintaining a focus on global discourse structure, introducing information in because clauses that does not realize cohesive links within the larger text. Weak compositions have been shown to have a greater number of topics introduced, but less depth and follow-up in the treatment and development of those topics (Albrechtsen, Evensen, Lindeberg, & Linnarud, 1991). Because clauses often indicate where more development of ideas is needed. Text (27) is an example in which the writer introduces a literary reference to support the thesis of the essay, but does not develop the idea:

(27) In Joseph Conrad’s Heart of Darkness, Kurtz, the main character, abandoned society to live with the natives. Kurtz only lives with the inferior people, the natives, because he is afraid to face reality of being a loser.

No more is said about Conrad or Kurtz. While a more proficient writer might use the statement about Kurtz being afraid to face reality as a point of departure for further elaboration, this writer does not. Using because clauses cohesively requires a focus on the larger discourse context, either to re- evoke some notion from earlier text or to introduce and then follow-up on a new idea. The work of constructing a sentence may distract developing writers from maintaining their focus on the broader discourse level. In addition, they may lack alternative syntactic strategies for clause combining.

Developing ideas and elaborating points through various levels of discourse organization is quite difficult for the inexperienced writer. Applebee (1984a) found that many students have difficulty producing balanced arguments that are well-developed, often resorting to listing points without developing them. Shaughnessy (1977) suggests that writers need resources for moving between concrete and abstract statements, from cases to generalizations. They need to explicitly mark the logical and rhetorical relationships between the various components of their essays—the sentences, paragraphs, and larger units of composition—in order to present a thesis and support it. Shaughnessy notes that students’ inability to accomplish this usually means that they do not control the ways of generalizing associated with academic writing. These are grammatical issues, as accomplishing this kind of overall macrostructuring requires the student to make choices at the level of grammar and lexis that support the larger organization. As Rose (1989) points out, students know that they need to integrate their examples with their arguments, but they often do not know how to do this; they lack knowledge of the expected grammatical ways of introducing an example, linking it with their argument to use it as evidence, and then saying how it is connected to their argument and the larger point.
The textual resources of the grammar are crucial for presenting a well-organized and developed expository essay. The focus here has been on how choice of theme, clause-combining strategies, and cohesive resources are functional for this purpose. These resources also contribute to the strategies writers need to adopt to construe interpersonal meanings in academic registers, as nominalization and lexical, rather than conjunctive, means of specifying logical relationships enable language users to adopt a more authoritative stance.

Summary

Academic writers need to draw simultaneously on a variety of register features to create texts which present information authoritatively in ways that are effective in realizing a particular genre. This chapter has shown how these linguistic resources work together and interact with each other in realizing an expository essay of the type that is expected of the successful secondary school graduate, demonstrating how the meaning-making resources of the grammar realize the context of exposition. Making thematic choices that scaffold the development of the text, for example, depends on the writer's ability to condense information in nominalizations and complex noun phrases. Using effective clause-combining strategies calls for control of technical and abstract vocabulary that realizes the logical relationships in the clause in verbs, nouns, and adjectives instead of conjunctions. To realize the authoritativeness expected in this genre, the writer needs to be able to make thematic choices and control evaluative language that effectively supports the thesis being proposed. It is not the presence of any particular feature, but the constellation of features that results in effective expository writing. Writing an expository essay requires more than just good ideas. To effectively present those ideas, the writer needs to draw on particular grammatical and lexical features that enable the authoritative presentation of information which is structured in the ways that are expected.

CONCLUSION

A major challenge that faces students as they learn to write is moving from the linguistic choices that are typical of informal interaction to draw on linguistic elements that are effective in school-based writing. Although children draw on the grammar of informal interaction as they first learn to write, they need to go beyond those choices if they are to become successful in school-based ways of using language. Studies of students' writing development show the slow evolution that leads toward ability to realize school-based registers and genres. Both first and second language development seems to follow a similar path in this, with move-
ment from a clause-chaining, loosely organized approach to the more condensed clause structure of academic registers.

This chapter provided a brief overview of some of the genres that are typical in schooling contexts, noting grammatical differences in personal, factual, and analytical texts. It demonstrated that advanced genres in each of the categories draw on the elements that chapter 3 showed are characteristic of academic contexts more generally. It then demonstrated how the academic register features described in chapter 3 enable students to write an effective expository essay, a key genre of schooling. The macrostructure of expository essays was described and the lexical, grammatical, and discourse features that realize the situational context (field, tenor, mode) of expository essays were analyzed in some detail. In chapter 5, the language of schooling will be described again at a general level in terms of the linguistic expectations for how texts are structured in different school subjects.
The same evolutionary processes which make it possible to construe experience, by transforming it into meaning . . . also provide the means with which to challenge the form of the construal. When experience has once been construed, it can be reconstrued in a different light.

—Halliday (1998, p. 188)

The language of schooling was described in general terms in chapter 3, focusing on the many commonalities in the linguistic features of the texts and tasks of different academic disciplines. Chapter 4 explored some grammatical and discourse features of the expository essay to demonstrate how a particular genre of schooling requires control of those linguistic features. This chapter extends this grammatical analysis to examine two subject areas of schooling, science and history, to show how the register features are realized in different ways in different disciplines, and to show what the linguistic features common to those disciplines reveal about academic registers more generally.

Science, history, and other subject areas present major challenges to students, and a great part of the challenge is linguistic (Halliday, 1993a). Language differs in the discourses of different subject areas due to differences in the epistemologies of the disciplines as well as differences in methodologies and pedagogies. Each subject area of schooling has its own expectations in terms of the genres that students will read and write, and each genre is constructed through grammatical resources that construe the disciplinary meanings. Developing facility with new genres involves learning new lexical and grammatical strategies to fit new tasks and contexts. While each genre has its own register characteristics, each discipline as a whole can also be characterized in terms of the linguistic choices that
are typical and pervasive. This chapter presents some genres that are typical of science and history and explores the register features that characterize these disciplinary discourses more generally.

The chapter then shows how these registers are functional for realizing the kinds of meanings that are typically made in schooling. Although these registers are sometimes criticized as too abstract, dense, or distanced, without these linguistic resources, it is impossible to make the kinds of meanings that the different disciplines call for. At the same time, the grammatical and lexical choices that realize academic registers do sometimes obscure meanings, and they construct a world view or ideology that may be hidden from students’ conscious understanding if they have no tools for uncovering and revealing the view that the grammar naturalizes. It is important to understand both the functionality and the challenges that academic registers present as students try to make disciplinary meanings in their writing and to get meaning from reading academic texts. Both reading and writing issues are addressed in this chapter, with examples of student writing illustrating the challenges in science and examples of history textbook passages showing the challenges for reading.

MAKING MEANING IN SCIENCE AND HISTORY

Martin’s analysis of middle-school science and history texts identifies some general differences between the ways that science and history draw on features of academic registers (e.g., Martin, 1989b, 1991, 1993b). Broadly speaking, he shows that science discourse is technical, while social science discourse is abstract. This is because the language of science builds experience of the world, while the language of history builds interpretations of social experience. These differences, reflected in the different ways these subject areas draw on lexico-grammatical resources, are explored here. In the discourse of science, the focus is on grammatical metaphor and the role it plays in realizing technicality and structuring texts. In the discourse of history, the focus is on the grammatical resources that realize historians’ interpretations and perspectives. In both cases, the focus is on the pedagogical recontextualization of meaning in classroom assignments and textbooks. The discourse of professional scientists and historians is not the same as what students work with, but the recontextualization of the discourses for pedagogical purposes does reflect the values and ways of thinking of the disciplinary communities.

Science: Theorizing Experience

Learning science means developing new ways of thinking about the world through investigations that predict and control natural phenomena. Students learn to reason in ways that are considered logical as they come to understand and reproduce the same framework of meanings that scientists or other specialists
understand about an issue (Lemke, 1988). An important aspect of this is using vocabulary and grammatical forms effectively to construe scientific meanings. Controlling the discourse of science requires mastering the grammatical features of the language that construe science knowledge as well as the reasoning, values, and assumptions of the discipline. Lemke (1990) points out that “the language of science teaching is ‘expository’ or ‘analytical’ most of the time . . . used to express relationships of classification, taxonomy, and logical connection among abstract, or generalized, terms and processes. The language of other subjects, notably literature and history, tends to be more ‘narrative’ in character, . . . used to express relationships of time, place, manner, and action among specific, real or fictional, persons and events” (p. 158).

This makes the factual and analytical genres described in chapter 4 the ones that are most relevant for science education. Four science genres, Procedure, Procedural recount, Science report, and Science explanation, are presented in Table 5.1, based on Martin (1993a, 1993c), Veel (1997), and Wignell (1994). As in chapter 4, these genres are presented as general descriptions of the different kinds of tasks.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Purpose</th>
<th>Register Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure</td>
<td>To provide instructions for experimental activities.</td>
<td>Material process clauses, imperative mood to direct the reader, thematic markers of sequence in time (next, then, etc.), reference to tools and materials assumed to be in the immediate context (put the solution in the beaker).</td>
</tr>
<tr>
<td>Procedural Recount</td>
<td>To record what has been done in an experiment already conducted.</td>
<td>Material process clauses, declarative mood, past tense verbs, specific participants and events, passive voice.</td>
</tr>
<tr>
<td>Science Report</td>
<td>To organize information about things by setting up taxonomies of classes and subclasses; or by dividing a phenomenon into its parts or steps, or through description or listing of its properties.</td>
<td>Technical terms, generic participants, timeless verbs in simple present tense, large percentage of relational process clauses.</td>
</tr>
<tr>
<td>Science Explanation</td>
<td>To describe how and why scientific phenomena occur, dealing with interactions of factors and processes rather than a sequence of events.</td>
<td>Material and relational process clauses, generic participants, timeless verbs, organized in a logical sequence through grammatical metaphor.</td>
</tr>
</tbody>
</table>

that students are typically asked to do in school science classes, and not as definitive descriptions of what each genre is or should be. These genres are not always realized as discretely different text types, and the names and descriptions are only suggestive of some features that are commonly found in the texts of science schooling. Looking at the different genres provides a broad view of the ways that language constructs texts of different types. In actual classrooms, these genres may not occur as separate text types, and in any case, elements of one genre often occur in another (a procedural description as part of a larger report, for example).

School science has developed these genres because they enable presentation of the kinds of meanings needed to do science and to understand scientific reasoning. They are not the genres of the professional or academic scientific community, but the four genres can be seen as a recontextualization that forms a kind of pathway into scientific knowledge that has both gatekeeping and learnability functions (Veel, 1997). The first genres that students encounter if they do “hands on” work are procedures and procedural recounts. Students often begin learning a science topic with observations and experimental activities, so the texts they read for this purpose contain a series of instructions about what to do, the procedure. In constructing a procedural text, imperative clauses are clearly functional for outlining a series of steps. When students write about their experiments, on the other hand, their writing typically recounts the experience or procedure as a first step in documentation. This constructs a different genre, the procedural recount. Here the mood is declarative, with past tense verbs recounting the experience the student has had. In procedures and procedural recounts, experience provides a concrete basis for organizing the knowledge the students are writing about.

As students move into reading and writing more advanced genres in science, the text itself takes a primary role in shaping knowledge. In the science report, for example, students organize scientific information in texts that set up taxonomies and classifications, presenting and sharing knowledge in more generalized ways. Reports use timeless verbs in simple present tense and relational clauses with technical terms as participants. Science explanations describe how something occurs, explore cause–effect relationships, and construct theories about scientific phenomena, with the grammar enabling a logical organization and sequencing as it draws on grammatical metaphor to structure clauses in ways that enable the accumulation of information.

Of course there are many other kinds of texts that students work with in the context of science, including descriptions, comparisons, definitions, and syllogisms (Lemke, 1990). Each of the genres in Table 5.1 can also be shown to have variations and subtypes. Veel (1997), for example, describes a variety of explanation genres, including sequential explanations, which show how something takes place and describe observable activities, and causal explanations, which describe how and why something occurs. Factorial explanations deal with the combination of a number of factors, and theoretical explanations introduce and illustrate a theory.
Veel (1997) also discusses exposition and discussion genres that enable students to challenge science by arguing and persuading others, the level of linguistic proficiency needed for innovation and critical scientific literacy. Each of these science genres has its own development, with more rudimentary realizations at lower grade levels and more developed realizations as students gain proficiency with the science concepts and the language that construes them.

These genres become increasingly challenging, lexically dense, nominalized and abstract, as they move from temporal organization to logical organization (Veel, 1997). For example, the move from procedural recount to explanation requires a shift from the specific retelling of an experience to the general description of a scientific process. Students have difficulty producing the more advanced genres; for example, students may just recount the steps in a lab procedure when they need to discuss causes and effects (Applebee, Durst, & Newell, 1984). Students need to learn the different genres of science, but the features of each genre vary according to the expectations of teachers in particular classrooms and contexts. For purposes of understanding the linguistic features of science language more generally, it is useful to focus on the register features of the more advanced science genres. This section, then, explores some grammatical features of the report and explanation genres. Martin (1993c) calls reports “the major genre in science textbooks” (p. 187), and explanations “the main source of extended writing for students” in science (p. 191).

The language of science is often represented as abstract, objective, and information-oriented (Kinneavy, 1971; Lotfipour-Saedi & Rezai-Tajani, 1996). Scientific style is described as avoiding first-person pronouns with a tendency to use the passive voice and avoid conjunction (Kinneavy, 1971; Smith & Frawley, 1983). Kinneavy (1971, p. 88) calls science “thing”-oriented, suggesting that in scientific language, assertions must exclude personal feelings and persuasive or literary effect.

Martin (1993c) describes how science texts organize the world into “things” and into “processes.” Reports, the “thing” oriented texts, organize information by classifying elements or listing their properties. Explanations, the “process” oriented texts, classify processes or explain them through step-by-step explication. The register features that enable this classification and explanation are presented in Table 5.2. The linguistic features that construe the context of science at a general level enable the display of knowledge through technical terms in relational processes that often suppress agency, which, along with objective modality, also contributes to the authoritativeness expected in the construal of evaluation in science texts. Thematic progression enables the accumulation of information required for structuring scientific explanations and theories. All of these register features participate in grammatical metaphor, a resource that pervades science writing and draws on all these features in the construction of valued texts.

Chapter 3 introduced grammatical metaphor as a process by which concepts are construed in a grammar which is incongruent. This means that grammatical
metaphor takes semantic notions which are more congruently expressed in one linguistic form (e.g., explore as a verb) and reconstrues that notion in an incongruent way (e.g., as exploration, a noun). Chapter 3 pointed out that the evolution of grammatical metaphor in English was stimulated by the context of scientific inquiry (Halliday, 1993d). This section demonstrates the pervasiveness of grammatical metaphor in the construction of science texts and shows how it enables the presentation of science concepts and the construction of scientific theories.

When processes are reconstrued as nominalizations through grammatical metaphor, agents of the processes disappear. Using explore as a verb in a clause requires a subject, so someone has to be named as the one who explores. Using exploration, on the other hand, does not require an agent, as the process itself can serve as the subject of a clause. Scientific text presents processes in the abstract, with the focus on the process itself, not on the human parties who may be involved with the processes. This removes the agency and makes the language of science highly grammatically metaphoric (Halliday, 1993e).

A focus on the relational process reveals how grammatical metaphor operates. Chapter 3 described the six process types that underlie the semantics of the clause: material, behavioral, mental, verbal, existential, and relational. Material (action) processes are common in science texts, as they enable description of natural phenomena, as are relational processes that construe relationships among entities. Complex nominalizations participate in both types of processes to construct science explanations.

Relational processes are common in science reports and explanations, as the many definitions and technical taxonomies in science discourse create a context of high lexical density and grammatical metaphor (Halliday, 1993f, p. 71). The grammar of relational processes is complex and has been highly elaborated within systemic functional linguistics (Halliday, 1994), but here, focused on understanding the grammar of science, a key distinction can be made between relational

<table>
<thead>
<tr>
<th>Situational Expectations (Context)</th>
<th>Grammatical Features (Register)</th>
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<tbody>
<tr>
<td><strong>Display knowledge</strong> by classifying things, explaining processes and building theories</td>
<td>Technical terms</td>
</tr>
<tr>
<td></td>
<td>Expanded nominal groups with multiple modifiers</td>
</tr>
<tr>
<td></td>
<td>Material processes construct events and happenings; relational processes construct description, definitions, and conclusions</td>
</tr>
<tr>
<td><strong>Be authoritative</strong> by presenting conclusions in “objective” ways</td>
<td>Evaluation through objective modality that suppresses agency</td>
</tr>
<tr>
<td><strong>Structure text in expected ways</strong> that build up information step by step</td>
<td>Grammatical metaphor enables thematic progression from clause to clause</td>
</tr>
</tbody>
</table>
processes that indicate how one thing is a sub-class of another and relational processes that indicate how a part relates to a whole, as these two types of relational processes construe the classification and composition that are basic to science explanations (Martin, 1993c). The grammar used to classify has relational clauses which are typically reversible, as in (1):

(1) Solutions are mixtures that . . . = Mixtures that . . . are solutions.

The grammar of composition, used to describe how one thing is a part of another, does not have reversible clauses, as in (2):

(2) Animal cells have a membrane but not Membranes are had by . . .

These two types of relational processes, the identifying and the attributive (Halliday, 1994), are used to define technical terms that participate in two fundamental semantic relations: \( a \) is a kind of \( x \) (hyponymy) and \( b \) is a part of \( y \) (meronymy). These two processes in science are also different grammatically. The differences in the grammar reflect differences in the underlying semantics of these two kinds of clause.

Technical terms are very important for constructing science, as they condense information so that an analysis and theory can be developed. The grammar uses resources such as noun compounding, expanded noun phrases, and nominalization to create the technical terms common in scientific discourse. Technical terms are not just abbreviations, but new meanings that help construct scientific theories by participating in the explication of processes (Martin, 1993b). Scientific explanations draw on technical terms to develop a chain of reasoning in which each step leads to the next. Grammatical metaphor is a key resource for this, as nominalization enables the creation of technical terms and their participation in building explanations.

Science texts rely on grammatical metaphor as a resource for construing the abstract and technical meanings and logical reasoning that science requires to structure texts so that they move from familiar to new information (Unsworth, 2000a). Grammatical metaphor enables writers of science to be flexible in presenting information and structuring texts at the same time it realizes the technicality and interpersonal stance that are valued in science writing. This section looks in turn at the construal of technicality, reasoning within the clause, and the structuring of text that grammatical metaphor enables. In these three roles, grammatical metaphor participates in the construction of the ideational, interpersonal, and textual meanings that construe science discourse; demonstrating that these metafunctional meanings are simultaneously realized in register choices.

The examples in this section come from students’ writing in a university chemical engineering course (Schleppegrell, 2002). The students are reporting on an experiment they conducted in which they used Stefan diffusion tubes to
determine the diffusion coefficients for three solvents in air. Each report has seven sections: Abstract, Introduction, Theory, Experimental Method, Results, Discussion, and Conclusions. Each section has its own demands related to the genre that underlies it (the Experimental Method section, for example, has features of the Procedural Recount). Here examples from the Theory and Discussion sections of students’ reports show how the technical meanings are enabled through grammatical metaphor and other resources of the grammar.

Grammatical metaphor contributes to the development of technicality through nominalization. Sentences written by two different writers are compared at (3) to show how this resource participates in clause structure:

(3) Writer A: \( D_{AB} \) has a \textit{temperature dependence}.  
Writer B: Diffusion coefficients among other things \textit{depend largely on temperature}.\(^1\)  
(Note that \( D_{AB} = \text{diffusion coefficient} \))

Writer A uses a technical term, \textit{temperature dependence}, a grammatical metaphor that presents a process, \textit{to depend on temperature}, as a nominal element. As a nominal element, it can then participate in a relational process as an attribute of the diffusion coefficient. Writer B, on the other hand, using the congruent \textit{depend}, “says the same thing,” but does not draw on grammatical metaphor to construe the process as a technical term. Nominalization through grammatical metaphor is an academic register feature that is highly valued in this genre because it enables the creation of technical terms and the construction of densely structured texts.

The dense structure emerges from a second role of grammatical metaphor. Besides construing technicality, grammatical metaphor also enables reasoning \textit{within} a clause rather than \textit{between} clauses. This is illustrated at (4), which again compares how a similar notion is expressed by two different writers:

(4) Writer A: The three temperatures of acetone that were investigated produced calculated \( D_{AB} \) values which increased \textit{with increasing temperature}.  
Writer B: The diffusivity is higher \textit{when the temperature is raised}.

Here Writer A uses a clause structure where two complex nominal groups (\textit{The three temperatures of acetone [that were investigated]; calculated \( D_{AB} \) values [which increased with increasing temperature]}) are linked with a verb, here a material process, \textit{produced}. Both nominal groups are expanded with embedded clauses (marked with brackets above). The point that Writer B uses two clauses to make, that diffusivity is higher at higher temperatures, is made by Writer A in an embedded

\(^1\)In this section, some examples written by second language writers have been edited to correct surface errors such as spelling and subject–verb agreement for ease of reading.
clause, *which increased with increasing temperature*. Writer A’s highly information-packed sentence also identifies the substance she investigated (acetone), and refers to both her own activities in the experiment (*calculated $D_{AB}$ values*), and the experimental process itself (*which increased*). Grammatical metaphor and other reduced clausal structures enable a writer to incorporate many concepts into one clause, constructing the lexically dense texts that present scientific information efficiently and concisely.

The examples at (4) also demonstrate how grammatical metaphor enables a causal explanation without conjunctions, a characteristic of academic registers more generally. Writer A takes the notion *raise*, realized in a verb by Writer B, and realizes it as a quality of the temperature in the participial adjective *increasing*. Grammatical metaphor enables Writer A to present the causal explanation of temperature’s effect, then, in the prepositional phrase *with increasing temperature*. While Writer B depends on the grammar of time sequence to realize the causal link, using *when* to link the clauses about the effect of temperature, Writer A presents the conjunctive relationship of cause in a prepositional phrase which itself is embedded in a relative clause within an expanded nominal group, creating a denser text.2

Writer A manipulates the resources of the grammar in sophisticated ways that enable her to pack a lot of information into each clause. Writer B, on the other hand, in a way that is typical of many students who do not yet control the resources of academic registers, uses a more congruent way of making the causal links, drawing on an informal style of explanation that is causally explicit but typically less highly valued than the nominalized grammatically metaphorical style.3 Grammatical metaphor helps structure a clause in ways that allow more information to be incorporated and greater conciseness to be achieved.

Grammatical metaphor is also a resource for structuring a text beyond the clause, as the shifts in grammatical realization that it allows (e.g., from verb to noun, as in example (3), or from conjunction to preposition as in example (4)), enable manipulation of thematic elements in the clause in ways that allow for more options in the structuring of the information in a text (Halliday, 1998; Ravelli, 1988). This is illustrated in (5), where Writer A presents the assumptions that guided her experiment (elements that realize assumptions are underlined):

(5) For the analysis, these systems will be considered binary. Air will be treated as a singular compound. The error introduced by this simplification is assumed to be negligible (cites two sources). . . . The subscript $A$ will be used to represent

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2See Mohan (1997), Mohan and Huxur (2001), and Mohan and Van Naerssen (1997) for studies that explore these kinds of differences in the construal of causality.

3The report written by Writer A was considered by instructors in the course to be a good example of what was expected in this assignment, while the report by Writer B was considered an example of a report that needs much improvement.
the diffusing vapor, while B, the assumed stagnant air. . . . When eq. (1) is combined with the species continuity equation, assuming no chemical reaction, . . . , and the diffusion process considered one dimensional (z direction), (equation) Eq. (3) results. Here it was also assumed that $N_A >> N_B$. This assumption depends on B having negligible solubility in A. The accumulation term can be neglected if one assumes a quasi-steady state condition. An order of magnitude analysis will show that this is a valid assumption when (equation) . . . Assuming eq. (4) holds, . . . This is taken to be the gas-phase concentration . . . Equation (6) has been modified from the original with the assumptions of ideal gas and $M_A$ on the same order of magnitude as $M_B$. . . .

This writer uses a variety of verbs, including consider, treat, assume, and is taken to be, in the clauses where assumptions are presented, demonstrating control over a range of lexical resources. In addition, she is able to draw on grammatical metaphor to use the notion assume in a variety of word classes, including verbal, nominal, and adjectival forms that participate in a variety of clause functions. She can construe this process as a quality (the assumed stagnant air), as a nonfinite predicator (assuming no chemical reaction), or as a clause participant (this assumption). In using the nominal form, the writer is able to use assumption in a variety of positions in her clauses; for example, in sentence complements (this is a valid assumption when) and in prepositional phrases (with the assumptions of $Y$).

Drawing on this variety of ways of presenting the same lexical meaning gives the writer a flexibility that enables her to construct a text which links from clause to clause in cohesive ways, elaborating on the set of assumptions she adopts for the experiment. This is illustrated in the sentences from (5) presented at (6):

(6) Here it was also assumed that $N_A >> N_B$. This assumption depends on B having negligible solubility in A.

The first clause presents $N_A >> N_B$ as new information, with assume used as a passive verb; a construction that allows the new information to be highlighted at the end of the clause. In the following clause, use of the nominal form this assumption as theme/subject enables the writer to begin the clause by referring to this information and then go on to qualify the assumption appropriately. By drawing on incongruent forms of assume, the writer is able to employ a wide range of options for text construction and development.

The nonfinite clauses with assuming also contribute to text structuring, as Writer A includes additional assumptions where appropriate (When eq. (1) is combined with the species continuity equation, assuming no chemical reaction, . . .), or uses the non-finite clause as the starting point for her next statement, introducing as background an assumption that is a condition for the next equation she will present (Assuming eq. (4) holds, . . .). By controlling the resources that enable her to use the notion assume in grammatically different ways, this writer is able to bring texture to her report, managing the flow of information effectively as she
develops her explanation. In addition, she projects an authoritative interpersonal stance by adopting impersonal ways of presenting her assumptions that draw on passive and non-finite verb forms.

This demonstrates how construing interpersonal meaning in ways that appear objective also depends on the resources of the grammar. Interpersonal meanings, like ideational and textual meanings, are inevitably construed in every clause, and failing to construe these meanings in ways that are valued and expected can have negative consequences for the student writer. The kinds of interpersonal meanings that are presented in lab reports, as in other kinds of academic writing, include how explicit the writer wants to be about where her assessments are coming from, how subjective or objective she wants them to appear, how definite they are, and so on (Martin, 1995). Chapter 4 showed how interpersonal meaning can be realized objectively or subjectively and explicitly or implicitly. Examples of each of these types are shown in (7):^4

(7) Objective (explicit): \emph{It is obvious} that these results are in error.
Objective (implicit): \emph{Clearly} these results are in error.
Subjective (explicit): \emph{I believe} that these results are in error.
Subjective (implicit): These results \emph{must} be in error.

In science discourse, objective presentation enables the construal of authoritativeness as it puts the individual writer in the background. The evaluation is construed as fact, rather than as opinion, and the responsibility for the evaluative comment is not individuated. With subjective presentation, it is always clear that the evaluative comment is the interpretation of the writer alone, rather than emerging from the experimental results. Chapter 4 suggested that the explicit subjective presentation, as in \emph{I believe that these results are in error}, is a form that students need to move away from as they learn to present their views in the more highly valued objective ways.

The examples at (8) show how Writer A draws on the objective options to construe evaluative meanings:

(8) Objective (explicit):
(a) Given the error bounds on the calculations, \emph{it is not possible} to draw any firm conclusions about this from the data.

^4Halliday (1994, p. 355) suggests that the explicit presentations of modal responsibility can also be seen as grammatical metaphors, as they involve incongruent realization of modal meaning. Modality is congruently realized in modal verbs or adjuncts (must, clearly). The explicit presentations do not incorporate modality congruently. Instead, the modal meaning is realized in clauses projected by other clauses (It is obvious; I believe). In explicit subjective modality, grammatical metaphor presents the evaluation as a projection of what the writer believes. In explicit objective modality, interpersonal grammatical metaphor construes the evaluation as fact, rather than opinion. In implicit modality, the evaluation is not construed as a projected belief or “fact,” but is presented in the modal adjunct (Clearly) or in the modal verb (must be).
(b) Having said this, however, it is difficult to draw any firm conclusions from the results about the dependability of the Stefan diffusion tube method for measuring diffusivities.

Objective (implicit):
(c) A large molecular size is expected to retard the compound’s rate of diffusion.
(d) A great degree of uncertainty is attached to these results.
(e) Perhaps a variation in experimental design and not a large degree of variability in the length measurements is to blame.

This writer realizes the modal responsibility for her statements as something objective rather than using a subjective modality such as this may be or I did not expect or it might be wrong. The explicitly objective realizations at (a) and (b) include evaluation (it is not possible; it is difficult), in structures which construe possibility and ability as facts for which she is not the apparent source. The implicit evaluations also do not individuate the student writer. At (c) she presents generalized expectations and at (d) she construes the reliability of her results as uncertainty, a nominal element that presents this as an objective “thing.” She often realizes implicit objective modality in the use of perhaps, as at (e), where she draws on implicit objective construal of possibility to suggest an alternative interpretation related to the discussion of possible error in the experiment. This implicit objective presentation is a useful device that construes modal responsibility as something outside the author and enables the presentation of options that the author does not have to be completely committed to.

These grammatical strategies realize authoritativeness in these laboratory reports, but developing writers tend to draw heavily on the subjective options in construing intersubjective meanings, either through the explicitly subjective forms with I or through reliance on modal verbs (Hyland & Milton, 1997; Schleppegrell, 2002). In (9), a student writer construes implicit subjective modality in modal verbs (modal verbs highlighted):

(9) There were a lot of assumptions associated with this experiment which could cause some discrepancy in the final results. It was assumed that the temperature at the interface was the temperature of the liquid and this may not be the case. This assumption could have some effect on the final result because as stated earlier, the diffusion coefficient is a function of the temperature. It was also assumed that air is an ideal gas and single species, and that may not be the case because air is a mixture of different species. This also may affect the final results.

This writer uses the implicitly subjective modals (could, may) to suggest that some assumptions of the experimental procedure might not have been valid. However, without control of the verb tense that would situate these possible effects in the context of the experiment (e.g., could have caused; may not have been, etc.), the text appears to locate the uncertainty more in the writer than in the re-
result. This writer’s authoritativeness is also diminished because the modals appear in conjunction with other features of interactional, rather than academic, registers, including lexical choices (a lot of) and clause chaining with and and because. All of these features together realize a less authoritative presentation than can be achieved in grammatical choices that realize the scientific meanings in the more condensed register that construes the objectivity that is valued in science texts. Evaluation pervades scientific discourse, where there is no sharp distinction between fact and evaluation (Hunston, 1993). Reports on experimental results incorporate assessments related to the reliability and validity of the findings, and the report and assessment are often realized in the same clause through grammatical resources that enable evaluation.

This section has highlighted in general terms the register features that construe scientific meanings. As Table 5.2 shows, these include technical terms and expanded nominal groups, often realized in grammatical metaphors that participate in material and relational processes as theories and explanations are constructed. These processes suppress expression of agency, which contributes to the “objective” construal of authoritativeness. Objective realization of modality, both explicitly and implicitly, also contributes to this authoritative stance. Grammatical metaphor also enables the kind of thematic progression typical of science discourse, where nominalization enables a linking from clause to clause as new information is reconstrued in a nominal group that serves as the theme of a succeeding clause. The display of knowledge in science in the classification and explanation that build theories, and the authoritativeness of science discourse in presenting conclusions in objective ways, emerge in texts constructed so that information is accumulated and presented step by step. These are the situational expectations that constitute the context of science discourse, and the grammar is the resource that enables the scientific meanings in the language of schooling.

**History: Interpreting Experience**

History is construed through a different kind of discourse than science. History is primarily a textual construction, and the foregrounding of interpretation gives history discourse its distinctive character. Based on an analysis of middle-school history textbooks in Australia, Eggins, Wignell, and Martin (1993) characterize the “historical perspective” students need to understand history as “a sense of time, a sense of cause–effect relationship, an understanding of the interaction of past and present, and an understanding that history is a dynamic relationship of people, place, and time in which some events can be judged to be more significant than others” (Eggins et al., 1993, p. 75). When historians write history texts, they arrange, interpret, and generalize from facts and events. In so doing, “people are effaced, actions become things, and sequence in time is replaced by frozen setting in time” (Eggins et al., 1993, p. 75). This is accomplished in linguistic
choices that are quite different from the language students use to talk about the events of everyday life.

The features of middle school and secondary school history discourse have been described by functional linguists (Coffin, 1997; Eggins, Wignell, & Martin, 1993; Martin, 1989b, 2002; McNamara, 1989; Schleppegrell & Achugar, 2003; Schleppegrell, Achugar, & Oteiza, 2004; Unsworth, 1999; Veel & Coffin, 1996; Wignell, 1994), with genres of history described in Coffin (1997) and Martin (2002). Coffin (1997) shows how history genres move from constructing the past as story, with a focus on particular, concrete events unfolding through time, to constructing it as argument, with a focus on abstract theses organized in text time. This move from narrative to expository genres in reading about history draws on the abstract language that is necessary for shifting from a temporal organization of text (recount, account) to rhetorically organized texts (explanation, argument) that draw on the resources of academic registers to construct interpretation. Four genres of history education, historical recount, historical account, historical explanation, and historical argument, are presented in Table 5.3, based on Coffin (1997).

The first genre Coffin (1997) describes is historical recount, a retelling of events. Although drawing on some features of narratives more generally, for example, in their organization through temporal links, historical recounts are distinctive in having generic and nonhuman participants that introduce abstract and metaphorical elements into the discourse. Events are nominalized into periods, eras, and stages (Coffin, 1997, p. 210) that can then be evaluated by the historian with modifiers that describe and classify them.

Next is the historical account, which adds causal elements to tell why things happened as they did. Coffin (1997) points out that adding causal elements “marks an important ideological shift from viewing the past as a natural and arbitrary unfolding of events to viewing a sequence of events as underpinned and determined by causal patterns” (p. 212). Grammatically, these causal patterns are typically realized in verbs like led to and resulted in, making it possible to present events or event sequences as nominalized agents in history, where one event can be constructed as causing a subsequent event (e.g., These differences between the North and the South grew into sectionalism). Theme/rheme patterns help structure the text to support this. Historical accounts go beyond recounting the past to explaining it, although still within a framework in which the sequence of historical events provides the organizing principle.

A more advanced genre that Coffin identifies is the fully formed historical explanation, where temporal organization is no longer primary. Instead, explanations are organized as a series of causes or consequences. As in science, different types of explanation can be identified in history texts at finer levels of description; for example, factorial and consequential explanation are able to integrate long-term, structural causes (or effects) with short-term precipitating events. Another advanced genre that is common in history discourse is the historical argu-
TABLE 5.3
Common Genres in History Education

<table>
<thead>
<tr>
<th>Genre</th>
<th>Purpose</th>
<th>Register Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical Recount</td>
<td>To retell the events in a sequence.</td>
<td>Temporal links through adverbs, prepositional phrases, and conjunctions; movement from specific to generic and non-human participants, nominalization to package events over time into things that can be evaluated.</td>
</tr>
<tr>
<td>Historical Account</td>
<td>To account for why things happened in a particular sequence; to explain rather than simply record the past.</td>
<td>Causal links, nominalization to present events as agentive in bringing about subsequent events, theme-rheme patterns organize texts to highlight this structure. Causes and consequences are not organized temporally; instead, the explanation is built logically with conjunctive links in theme position; significance of events construed through evaluative lexis and clause structures.</td>
</tr>
<tr>
<td>Historical Explanation</td>
<td>To explain past events by examining causes and consequences.</td>
<td>Argument is organized rhetorically, with interpretations presented as possibilities that have to be argued for; resources of modality used to set up or argue against claims.</td>
</tr>
<tr>
<td>Historical Argument</td>
<td>To advocate a particular interpretation of the past through analysis and debate of a range of positions and arguments.</td>
<td>Argument is organized rhetorically, with interpretations presented as possibilities that have to be argued for; resources of modality used to set up or argue against claims.</td>
</tr>
</tbody>
</table>

Note. Based on Coffin (1997).

Arguments are organized rhetorically and take positions for or against particular interpretations of history. These are characterized by the way resources of modality are used to present claims and argue for or against particular positions (Coffin, 1997). Historians build interpretation into their texts in the ways they evaluate causes and consequences with terms like *key*, *major*, *significant*, etc.; through evaluative statements such as *it is clear that this benefited . . .*; and through choices about what to present as “fact” (Coffin, 1997, pp. 220–222).

Coffin’s description of these and other genres of history is suggestive of the different text types students will encounter. The actual textbooks students read draw on elements of these genres in different ways, with some texts foregrounding more account-like texts and others incorporating more explanation or argument, depending on the topics they consider and the age level of the students they are addressing. In an analysis of California eighth-grade history textbooks, Schleppegrell, Achugar, and Óteiza (2004) found mainly texts that account for and explain ideas and events, with a few recount-like texts, in the form of biographies and brief narratives, interspersed throughout. In general, the textbooks present a
sequence of events using material processes and temporal adjuncts. But in these texts, as in the ones Coffin describes, the degree of temporal organization varies according to the purpose of the text; whether it is a recount of events, a debate over ideas, or an explanation.

Table 5.4 presents the register features of history discourse at a general level. Different genres draw on these features in different ways as they construe different situational contexts. Recounts, for example, have more personal and individual participants, while explanations and arguments are constructed with abstract and institutional participants (see also Unsworth, 2000a). But as with science, the register features of history can also be described more generally, to show how a constellation of linguistic features construes the interpretation that pervades history discourse. The register features of history discourse, shown in Table 5.4, include the ideational resources that realize field and enable the display of knowledge about historical events in a high proportion of material processes, a continuum of participants that runs from personal or individual to abstract or institutional, and logical relationships of temporality and causality. The interpersonal resources that realize tenor construe authoritativeness as the writer records, interprets, and judges, drawing on mental processes that report the views of others, modality that constructs power relationships, and evaluative language that realizes implicit assessment of diverse attitudinal meanings in the resources for appraisal. The textual grammar that realizes mode includes resources that structure texts in ways that enable explanation and interpretation, such as internal conjunctive links, grammatical metaphor to enable reasoning within the clause, and thematic resources that mark the organizational structure. All of these resources collaborate in enabling the historian to build interpretation into texts in ways that are often implicit.

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<td>Mainly material processes, with relational processes to construct description and background and verbal and mental processes to construct points of view</td>
</tr>
<tr>
<td><strong>Be authoritative</strong> by recording, interpreting, judging</td>
<td>A continuum from personal/individual to abstract/institutional participants</td>
</tr>
<tr>
<td><strong>Structure text in ways</strong> that enable explanation and interpretation</td>
<td>Logical relationships of temporality, causality</td>
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<td></td>
<td>Implicit modality</td>
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<td>Appraisal through evaluative lexis</td>
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<td></td>
<td>Theme position exploited to mark organizational structure through grammatical metaphor, conjunctive links, and temporal/locative phrases</td>
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<td></td>
<td>Internal conjunctive links</td>
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</table>
It is well understood that history is interpreted in the choices the historian makes about which events to present, which participants to include, whose voices to let be heard, and how to order or organize events in ways that show how one led to another. What is in focus here, however, is less well understood; that every clause in a history text contributes to the interpretation that the historian is constructing, and the ideational, interpersonal, and textual choices together build the point of view that is being presented.

This section focuses first on the field of history discourse. Chapter 3 showed how choice of verbs and the processes they construe reveal differences in register related to field. Choice of process also helps the historian present interpretation. Material processes are the most common in history texts, as they construe the actions and events that the historian is chronicling. As discussed in chapter 3, material processes (realized in action verbs) construe events, verbal and mental processes (realized in saying and thinking verbs) construe the saying and thinking of participants, and relational processes (realized in being and having verbs) construe description and background information. These are the process types that occur most often in history textbooks, as illustrated in (10), a paragraph from a text about the Missouri Compromise (Appleby, Brinkley, & McPherson, 2000, pp. 437–438).

(10) In 1819, 11 states in the Union permitted slavery and 11 did not. The Senate—with two members from each state—was therefore evenly balanced between slave and free states. The admission of a new state would upset that balance. In addition, the North and the South, with their different economic systems, were competing for new lands in the western territories. At the same time, a growing number of Northerners wanted to restrict or ban slavery. Southerners, even those who disliked slavery, opposed these antislavery efforts. They resented the interference by outsiders in Southerners’ affairs. These differences between the North and the South grew into sectionalism—an exaggerated loyalty to a particular region of the country.

Table 5.5 shows the process that each clause in this text construes. As Table 5.5 shows, most of the clauses (six out of nine) realize material processes, outlining the events that build toward the compromise that brought Missouri into the United States as a slave state at the same time that Maine was admitted as a free state. The material processes with their key participants are presented at (11):

(11) 11 states permitted slavery.
11 did not [permit].
The admission of a new state would upset that balance.
The North and the South were competing for new lands.
Southerners opposed antislavery efforts.
These differences between the North and the South grew into sectionalism.

Many of the participants in these processes are abstractions realized in nominal groups: slavery, the admission of a new state, that balance, these antislavery efforts,
these differences between the North and the South, sectionalism. Others are nonhuman actors: 11 states in the Union, The North and the South. And although these clauses all construe material processes, some of these are themselves abstract or metaphorical. The sentence The admission of a new state would upset that balance, for example, has two abstract participants, The admission of a new state and that balance, linked in a material process that is, however, conditional (would) and metaphorical in a lexical sense (upset). The causal relationship is realized in the process, and the consequence of admitting another state has to be understood in reference to the 11 states that permitted slavery and the 11 that did not (that balance), in the context of an expanding United States.

Abstraction, achieved through nominalization, is functional for presenting the kinds of meanings that history deals with when it takes events and construes them in terms such as the industrial revolution or the great depression (Martin, 1989b). Nominalizations downplay the human actors in history by presenting them as generalized classes of participants (Southerners, settlers), by presenting a series of events as a single “participant” (Reconstruction, Missouri Compromise), or by construing an action as a nominalized participant (the admission of a new state). Abstract participants such as institutions (slavery, Congress), things or places (the Constitution, the territory), and ideas (loyalty, sectionalism) also appear as “actors” in history texts, making it difficult to identify the real historical actors at the same time they enable priority to be given to generalized movements, events, and debates, rather than to individuals.

Another way history is made abstract is by removing agency in the representation of events. Various grammatical elements participate in this, allowing the historian, for example, to “set the scene” for discussion of a historical event or de-
bate. Text (12) is from a textbook passage about Reconstruction after the American Civil War (Appleby et al., 2000, p. 495), that begins with a description of the state of the South at the end of the war.

(12) The war had left the South with enormous problems. Most of the major fighting had taken place in the South. Towns and cities were in ruin, plantations burned, and roads, bridges, and railroads destroyed.

More than 258,000 Confederate soldiers had died in the war, and illness and wounds weakened thousands more. Many Southern families faced the task of rebuilding their lives with few resources and without the help of adult males.

The text presents the situation of the South by attributing responsibility for the problems the South is facing to an agent that is a nonhuman actor (The war). Events are presented as just “happening” (soldiers had died), or as having been done by an unidentified agent (roads, bridges, and railroads were destroyed). These strategies for effacing agency allow priority to be given to the state of events as it existed at that moment; functional for constructing a description that interprets a situational context to set the stage for the events that follow.

Along with the choice of processes and participants that construe historical events, historians also situate these events in time or relate them through cause or other logical relationships. The most frequent logical relationships construed in history texts are temporality and causality. Since history is about events through time, temporality is a key feature of history texts which can be construed in a variety of ways; for example, through temporal adjuncts (e.g., during the 1960s), hypotactic clauses (e.g., when he died . . .), or complex processes (e.g., began to disintegrate; Veel & Coffin, 1996). The degree to which a text is temporally organized varies according to its purpose; whether it is a recount of events, an explanation, or a debate over ideas. This means that a text explaining the elements of the Constitution takes a different form from one about events leading to the Civil War. But temporal features also participate in constructing explanations. In (13), a text about the U.S. Constitution (Stuckey & Kerrigan Salvucci, 2000, pp. 267–271), for example, temporal elements construct procedural explanations:

(13) (a) After Congress passes a law, federal agencies and departments usually determine how to put it into effect.

(b) During a time of national emergency the president may call a congressional meeting after the regular session has already ended.

The reader needs to distinguish between temporal references that build a “real time” chronology (in 1961, in 1984 . . .), and temporal references that help to scaffold an explanation.
When conjunctions are used in history texts, their meanings are often different from their typical meanings in everyday language. Ambiguity between temporality and conditionality, for example, can be seen in the various ways then is used in the text on Reconstruction, as illustrated in the examples at (14):

(14) (a) Congress voted to deny seats to representatives from any state reconstructed under Lincoln's plan. Then Congress began to create its own plan.
(b) These states then became caught in a struggle between the president and Congress when Congress refused to seat the states' representatives.

In (a), then construes the temporal organization; as a synonym of next. In (b), on the other hand, then expresses result or causality (As a result, these states became caught in a struggle). These meanings have to be understood as they are construed in each particular context. Temporal conjunctions can construe conditional meanings, as in (15), also from the Missouri Compromise text:

(15) President Lincoln offered the first plan for accepting the Southern states back into the Union. In December 1863, during the Civil War, the president announced what came to be known as the Ten Percent Plan. When 10 percent of the voters of a state took an oath of loyalty to the Union, the state could form a new government and adopt a new constitution that had to ban slavery.

A conjunction that would seem to be construing temporality, when, actually construes a conditional relation in the last sentence at (15): When 10 percent of the voters of a state took an oath of loyalty to the Union, the state could form a new government and adopt a new constitution that had to ban slavery. This is not a statement about an actual moment in time. Instead, the clause introduced by the conjunction when presents the condition under which the state could move toward reincorporation in the Federal government.

The ideational, interpersonal, and textual resources work together simultaneously in each clause. The way conjunctions are deployed illustrates this point. Chapter 3 showed how the use of conjunctions has implications for both the realization of field, in the logical meanings they construe, and for the realization of mode, as they work to structure text. Conjunctions can be used to refer to relationships in the sequence of historical events being presented (external relationships) as well as to structure a text by linking the elements into a cohesive whole (internal relationships). In the Constitution text, for example, adversative conjunctions construct alternatives and concessions as this text presents the limitations, specifications, and possibilities constructed in the Constitution itself. Examples of this are given at (16):

(16) (a) Despite their differences, the executive and legislative branches must cooperate for the system to work.
(b) Although Congress passes laws, the president can influence legislation by encouraging members to approve or reject certain bills.

The internal conjunctive links _despite_ and _although_, along with the modal verbs _must_ and _can_, enable the historian to incorporate interpretation into the discussion of the Constitution. Internal relationships can also be implicit. Sometimes internal relationships relate a sequence of clauses rather than single clauses and sometimes they are realized in resources other than conjunctions; for example, when a new paragraph is introduced by a conjunctive phrase such as _In this context, . . . ,_ referring back to what might be a long explanation of events.

Just as the grammatical resources that realize _field_ and _mode_ work together, the ideational and interpersonal resources that realize _field_ and _tenor_ also collaborate to construct the interpretation. Often texts are built around a debate in a particular time setting, organized around confronting ideas. The choices about whose views are presented obviously involve interpretation. But how those views are construed by the grammar is another, less obvious, way the text interprets. In the Missouri Compromise text at (10), for example, the mental processes realized by _wanted_ (_a growing number of Northerners wanted to restrict or ban slavery_) and by _resented_ (_They [Southerners] resented the interference by outsiders in Southerner’s affairs_) construct the two opinions on this issue, with the choice of _resented_ also drawing on resources for appraisal to construct the Southerners’ attitude, as presented by the historian. This shows how _tenor_ is realized in evaluative language that indicates the stance of the writer toward the issue.

Focusing on the _tenor_ of history discourse, Coffin (1997) and Martin (2002) have described the historian’s stance as that of a _recorder_, an _interpreter_, or an _adjudicator_. As recorders, historians present themselves as objective reporters of events. As adjudicators, they take the stance of explicit judge of what is being reported. Interpreter stance is intermediate between these two positions, and Martin (2002) suggests that _recorder_ and _interpreter_ stances are the most common in history texts. Two paragraphs from the Reconstruction debate at (17) are examples of how a historian moves from recorder to interpreter stance. The first paragraph is the same as (15), above.

(17) President Lincoln offered the first plan for accepting the Southern states back into the Union. In December 1863, during the Civil War, the president announced what came to be known as the Ten Percent Plan. When 10 percent of the voters of a state took an oath of loyalty to the Union, the state could form a new government and adopt a new constitution that had to ban slavery.

Lincoln wanted to encourage Southerners who supported the Union to take charge of the state governments. He believed that punishing the South would serve no useful purpose and would only delay healing a torn nation.

The two paragraphs in (17) draw on different process types to construe the two different perspectives the historian takes here. In the first paragraph, the histo-
rian takes a recorder stance in using material processes (*offered, announced, could form, adopt, had to ban*) to lay out the steps Lincoln took and what his plan would do. In the second paragraph, the historian takes on the interpreter stance, using mental processes (*wanted, believed*) to construe the historian’s interpretation of Lincoln’s motivation.

Other interpersonal resources, including modality and evaluative lexis, also help construe the particular kind of authoritativeness used to interpret history. Modal verbs, for example, participate in realizing interpersonal meanings that signal power differences. This can be seen in (18), also from the Reconstruction text:

(18) In July 1864, Congress passed the Wade-Davis Bill. The bill offered a plan much harsher than Lincoln’s. First, 50 percent of the white males in a state *had to* swear loyalty to the Union. Second, a state constitutional convention *could* be held, but only white males who swore they had never taken up arms against the Union *could* vote for delegates to this convention. Former Confederates were also denied the right to hold public office. Finally, the convention *had to* adopt a new state constitution that abolished slavery. Only then *could* a state be readmitted to the Union. (italics added)

The modals *have to* and *could* construct the conditions on the southern states’ reintegration into the Union, revealing the power relationships controlling this process, where the constraints on the southern states are realized as obligation and condition. The agent of these conditions is the abstract *bill*, and other resources of the grammar offer appraisal of this bill (*much harsher, but only, denied, etc.*). *Only then* is also used to construe a condition for readmission to the Union as it introduces the last sentence of (18), *Only then could a state be readmitted to the Union*. Evaluative lexis such as *much harsher* also contributes to the overall interpretation the historian offers. The authoritative tenor is constructed in these interpersonal resources, with features of field and mode also inevitably involved.

The textual resources of the grammar are deployed in various ways to realize the mode of history discourse, structuring texts in ways that enable explanation and interpretation. Reasoning within a clause through verbs rather than between clauses through conjunctions can result in very abstract texts as cause–effect relations are expressed through verbs like *established* and *resulted in* rather than through conjunctions such as *because* or *so*. In examining the causal relations that are a key feature of the more analytical genres of history, Martin (2002) shows how causality can be realized grammatically metaphorically in nominal elements (*reason, effects*), verbal elements (*leads to, results in*), prepositional elements (*through, for*), or through the actions of historical agents who *command, propose*, etc. An illustration of this is the concluding paragraph of the history text’s discussion of the Missouri Compromise, at (19):

(19) This proposal, known as the **Missouri Compromise**, passed in 1820. It preserved the balance between slave and free states in the Senate and brought about a lull in the bitter debate in Congress over slavery.
As (19) shows, grammatical metaphor makes it possible to present explanations that at the same time construct arguments about why one event has led to another. The Missouri Compromise preserved an abstraction, the balance between free and slave states in the Senate, and brought about another abstraction, a pause in the debate. The verbs preserved and brought about construe the Missouri Compromise, itself an abstraction, as an agent in the debate about slavery. On the other hand, the agreement on the Compromise is construed in this text in a clause without an agent, as the people who passed the law are not mentioned. Grammatical metaphor enables both the abstraction that is characteristic of history and the realization of causal relations within the clause as nominalized agents that act on other agents. Ideational, interpersonal, and textual resources all collaborate in the construal of interpretation as the processes construct causality without human agency, and the lexical choices indicate the historian’s positive (preserved the balance) and negative (bitter debate) valuation through resources of attitude appraisal (White, 2003), and exploit theme structure with a cohesive theme (It) that enables the historian’s conclusions to be highlighted at the end of the text.

Conjunctions and temporal adjuncts often appear in first position in the clause in history texts. This is a characteristic structuring device for history, where the temporal adjuncts move the timeline forward, and the conjunctions help organize the text. Text (20), which is (18) above reproduced with conjunctive and temporal themes highlighted, shows how the connectors help to structure the paragraph:

(20) In July 1864, Congress passed the Wade-Davis Bill. The bill offered a plan much harsher than Lincoln’s. First, 50 percent of the white males in a state had to swear loyalty to the Union. Second, a state constitutional convention could be held, but only white males who swore they had never taken up arms against the Union could vote for delegates to this convention. Former Confederates were also denied the right to hold public office. Finally, the convention had to adopt a new state constitution that abolished slavery. Only then could a state be readmitted to the Union.

The paragraph begins with a true temporal theme (In July 1864), but the structuring themes First, Second, Finally and Only then, provide scaffolding internal to the text as it sets forth conditions.

Martin (2002) describes the macro-organization of many history genres as having a structure of layers of prediction and accumulation, where the “Macro” theme for the text as a whole sets up the thesis, a “Hyper” theme in each section functions as a topic sentence to set up each point, and the clause themes help structure the argument or exposition within sections. He shows how this global structuring also depends on different grammatical choices in different parts of the text, with the introductions typically the most nominalized and abstract, the more narrative recount of events which typically follows the introduction less abstract, and the conclusions again typically relying heavily on grammatical meta-
for history, then, a variety of grammatical resources collaborate in the interpretation of events. Abstract participants, relational processes, and other resources efface social agents. Mental and verbal processes contribute to the interpretation through presentation of the thoughts and words of historical participants with resources of appraisal enabling attitudes and judgments to be presented implicitly. Temporality, causality, and other logical relationships are often realized within a clause. When they are realized in conjunctions, the conjunctions are often used in ways that are ambiguous between temporal and consequential meanings. Evaluative lexis and modality contribute to the interpersonal stance as authoritative and interpretive, and internal conjunction, grammatical metaphor and theme–rheme structuring construct the explanation and interpretation. Ideational, interpersonal, and textual meanings are realized simultaneously in each clause, so in history, as in science and in all academic registers, it is the constellation of features working together that constructs the texts that are functional for making disciplinary meanings.

**Summary**

This chapter has looked at the language of history and science and has shown how the complexity of the grammatical and discourse features of the genres that construe knowledge in these disciplines increases as the texts of schooling use language to synthesize and analyze information and to present theories and interpretations. The linguistic features of some of the advanced genres have been described in broad terms; of course each one can be described in more detail, and more genres than those described here are part of the later years of schooling. Other disciplines are also relevant. But the key point is that the grammatical features that realize these genres are the same features we have seen in chapters 3 and 4 as characteristic of the academic registers that are typical of a wide range of schooling contexts.

Science and history texts are constructed in complex nominal syntax with technical and abstract vocabulary and clause structure that often reasons clause-internally. They incorporate features that realize the author’s evaluative stance implicitly and objectively as they persuade and argue, with texts structured through exploitation of theme position, and clause-combining strategies that use grammatical metaphor and other strategies of embedding to link from what has been said to what is being developed. It is somewhat artificial to consider these linguistic resources separately, in their ideational, interpersonal, and textual manifestations, as it is through the collaboration among all these resources that the academic registers emerge. The elements themselves operate simultaneously in all dimensions. Grammatical metaphor, for example, has ideational grounding in the construal of a semantic notion in a form which departs from its most con-
gruent realization, but in the metaphoric form, it then participates in construing
the interpersonal authoritativeness and the textual structuring that characterize
these registers. The evaluation and interpretation in science and history are like-
wise not realized in discrete units, but in syndromes of features that together con-
strue the social meanings. The functional analysis reveals the complexity of
meanings construed in disciplinary texts and shows why the grammatical re-
sources are relevant and necessary for the tasks of schooling.

THE FUNCTIONALITY OF ACADEMIC REGISTERS

It is important for students to develop academic register options in different dis-
ciplines because particular grammatical choices are functional for construing
the kinds of knowledge typical of a discipline. Academic registers are not just
pretentious ways of using language that only serve to exclude the uninitiated.
The kinds of meanings that are created in academic contexts often cannot be
expressed in the language of ordinary interaction. Instead, school-based tasks
require particular ways of presenting information; the ways construed through
academic registers.

The research presented in chapter 2 suggests that “scientific” concepts (rele-
vant to science, history, and other disciplines) have to be consciously learned,
typically through schooling; different from the “everyday” concepts that are
learned through daily life (Vygotsky, 1986). This distinction is important for un-
derstanding the contribution of schooling to the development of language and
thought. Scientific explanations sometimes contradict the interpretations com-
mon sense would suggest. The language through which scientific concepts are
construed is different from the language through which everyday concepts are
construed, and learning the language has to be part of learning the concepts, as
the concepts are constructed through language.

Academic registers are functional for their purposes, to enable the presenta-
tion of information in the structured, authoritative ways expected in school con-
texts. Scientific English evolved the way it did as scientists developed the gram-
matical and lexical means of presenting scientific findings to share information
about the experiments they had conducted (Halliday, 1993b). In order to talk
about processes in the world as scientists do, they needed to name those processes
and talk about relationships among them. Technical vocabulary, expanded nom-
inal groups and nominalization, and construal of logical relationships in rela-
tional processes, the syndrome of features created through grammatical meta-
phor, makes this possible.

Scientists define and name what is discovered with a technical term, and then
use the technical term as a starting point for further inquiry. The technical term
treats the process as if it is a thing, turning what was a verb into a noun, for ex-
ample, so it can serve as the theme/subject of a clause which says something more
about the process. The grammatical context evolved over time with new grammati
cal options becoming more prominent as new ways of presenting knowledge
emerged historically in science (Halliday, 1993b). The grammatical and lexical
evolution occurred hand in hand with the evolution of the discipline, and now is
integral to making meaning in science.

The same is true of history. History is about interpreting. The non-agentive,
abstract constructions that construe events as participants in clauses that incor-
porate movement through time or causality enable the historian to construct his-
torical explanations that generalize human experience. The evaluative resources
of the grammar collaborate to supply the judgment and values that pervade the
text and are seldom stated explicitly. While the texts students work with are
recontextualizations of science and history discourse for pedagogical purposes,
they embody the core meanings that those disciplines incorporate in their more
authentic manifestations.

School disciplines are not about everyday knowledge. They construe special-
ized knowledge and a specialized grammar is part of that construal. This is true of
all the subject areas of schooling. Even mathematics, often considered a school
subject that depends less on language, has its own academic register features, and
a considerable amount of the knowledge required for success in higher levels of
mathematics is construed through language. Veel (1999), for example, demon-
strates that technical lexis, relational clauses, and the resources of the nominal
group are important grammatical resources for construing knowledge in mathe-
metics. Technical lexis realized in grammatical metaphor creates quantifiable en-
tities for the purposes of calculation (e.g., *it changes often* can be re-construed as a
nominal group *the amount of change*; Veel, 1999, p. 194). Relational clauses are
important for taxonomizing (e.g., *A square is a quadrilateral*), for introducing tech-
nical terms (e.g., *The mean, or average, score is the sum of the scores divided by the
number of scores*); or for providing parallel ways of talking about algebraic formu-
las (e.g., *the mean score is the sum of the scores divided by the number of scores* is a way
of talking about the formula $\bar{x} = \frac{\sum x}{n}$; Veel, 1999, p. 196). Relational processes
also allow for the construction of multiple-choice questions, which comprised
70% of the questions in a 10th-grade math test that Veel analyzed. He points out
that “multiple choice questions . . . represent knowledge as equivalence relation-
ships . . . and require the frequent use of grammatical metaphor and complex
nominal groups . . . to construe knowledge as ‘correspondences between things’ ”
(p. 197). He suggests that this means that math questions test students’ language
as much as their math understanding.

An important goal in education, then, should be to help students understand
the ways that language choices made by scientists, historians, and other academic
writers actively construct disciplinary knowledge. In addition, they need to be
able to use these features in their own writing in order to demonstrate their learn-
ing and participation in disciplinary contexts. Understanding about the role of
language is also important in the creation of pedagogical texts and tasks and in
the ways assignments are structured and scaffolded for students. As the next section illustrates, when pedagogic texts are constructed without a clear view of the linguistic features that are functional for achieving the pedagogical goals, achieving the goals can be a more difficult task.

The Language of Textbooks

A current trend in textbooks is that authors introduce informality and dialogic styles in an ostensible attempt to connect more readily with students’ everyday language (Biber, 1991). Textbook authors presumably introduce interactional features in order to make them less impersonal and more accessible to students, but attempts to introduce interactional features into school-based texts that are meant to be read can result in an incoherent register, which is not functional for its purpose. (21) is an example from a seventh-grade science textbook:

(21) Have you ever seen a “shooting star”? If you have, what you saw was actually not a star at all, but something within Earth’s atmosphere. (Recall that stars are located great distances away from Earth.) What observation might support the statement that “shooting stars” are a nearby phenomenon? What you saw were rock particles or “dust” that had entered the atmosphere. The heat created as the particles streaked through the atmosphere caused the meteor to glow white-hot, burning itself up before it could reach Earth’s surface. (Morrison et al., 1993, p. 407)

This text departs from academic register expectations in various ways. It begins with a question, Have you ever seen a “shooting star”? , establishing a pseudodialogue with the reader. Of course questions do occur in academic registers and can serve useful purposes of stimulating reader engagement. In this case, however, the author continues, seemingly acknowledging that the student might have answered yes or no (If you have), but responding only to the yes with information that what you saw is something within Earth’s atmosphere. Here the generic lexis (something) realizes a less formal register, but the clause itself provides a crucial piece of information for the reader (shooting stars are not stars, and they are within Earth’s atmosphere). The next clause, an imperative construction (Recall that stars are located great distances away from Earth), provides a parenthetical reminder about the location of stars to help students understand that something in Earth’s atmosphere cannot be a star. The imperative choice here realizes the kind of regulative register (Christie, 1991, 2002a) that is typical of classroom interaction, as the author directs the reader; again construing a context of interaction. The text then presents another question; not just a yes/no question, like the first, but instead one that asks for evidence that shooting stars are nearby, or in the Earth’s atmosphere.
Along with these less formal features, however, the author also uses technical and abstract lexis (*atmosphere*, *distances*, *observation*, *phenomenon*) and draws on the grammatical metaphor that is typical in science discourse. For example, the question *What observation might support the statement that “shooting stars” are a nearby phenomenon?* might have been realized more congruently as *What did you observe about the shooting star that could prove it is in Earth’s atmosphere?* So here the text shifts from the more informal tone of the beginning to a highly academic style. Although constructed as dialogue about an observation, the question itself asks the student for evidence to *support the statement* rather than for observations about the shooting star. The passage does not follow this question with information about what kind of observation might support the statement, nor does it assume a response by the reader, as the earlier question had. Instead, the next sentence assumes again that the reader has seen a shooting star, and defines it as *rock particles or “dust” that had entered the atmosphere*. But this definition is introduced by a thematic structure (*What you saw*) that again assumes an interactive participant who has, in fact, seen a shooting star. The student who has not had this experience is not recognized in the text.

The explanation for why the *rock particles or “dust”* would be glowing like a star is presented in a prototypical academic register construction: *The heat created as the particles streaked through the atmosphere caused the meteor to glow white-hot, burning itself up before it could reach Earth’s surface.* This sentence has a subject that is a complex nominalization, *The heat created as the particles streaked through the atmosphere*, followed by a causal process expanded with infinitive and participial clauses (*to glow white-hot, burning itself up*) as the authors explain why the meteor glows. The initial nominalization assumes students are already familiar with the notion that objects moving through the atmosphere become hot. Since the passage has not yet mentioned *heat*, however, presenting this as if it is known information, in the theme of the sentence, puts a major burden on the reader to “unpack” the meaning. Then, to understand this complex sentence, the student also needs to identify the central verb in the sentence, *caused*. But the verbal element *created* in the nominal group can easily mislead students, who might parse the nominalization *The heat created as the particles streaked through the atmosphere* as a clause in itself.

So the information that is key for comprehending this text and understanding shooting stars is presented through the grammatical resources of academic registers, with complex nominal elements and non-finite clauses creating a dense structure that is functional for presenting such definitions. The overall structure of the text, however, does not support the development of the disciplinary meaning. Instead, the author attempts to be personal, assuming an interactional relationship with the reader, and in so doing, creates a text that may be incoherent for many students. The key information, that shooting stars are rock particles or dust in Earth’s atmosphere, is presented in grammatical structures that bury the information in a quasi-interactional text that forces the reader to make a connec-
tion between the expansion of *What you saw* and the definition of *shooting star* (assuming that every student had answered this question positively). The definition itself is presented in a clause with past tense verbs (*what you saw, had entered*) that appear to refer to a specific instance, rather than with the present tense verbs we might expect in a definition of something that is timeless.

This text is a mixed register, with some dialogic features obscuring the fact that the information being presented is complex and abstract. It is neither fully interactional, nor is it appropriately academic, presenting information in ways that introduce concepts and construct explanations. As it is, the text presents the appearance of accessibility, and yet it requires understanding of technical terms and experience with unpacking dense clauses for comprehension. The pseudodialogic stance of the authors may frustrate students who are trying to understand the meanings without the background experience (seeing a shooting star) that the authors assume. The classroom context of reading textbooks is often not one of dialogue and interaction. In fact, students will often read this kind of text silently or will read it aloud in teacher-directed activities where they do not have an opportunity to answer the questions and create the suggested dialogue.

Text (21) illustrates the difficulties that can arise when an inappropriate register is used to construct knowledge. Academic registers are functional for the school-based texts which they help to construct, while a text that is inconsistent in register lacks coherence with respect to the context of the situation. Text (21) implies an interactive context where none exists, and such a hybrid of attempts at dialogue interspersed with heavily nominalized, dense informational clauses provides a poor model for academic discourse. School-based texts are not necessarily made more accessible, then, by drawing on interactional register features. They require the elements of academic registers in order to achieve a coherent presentation that builds and accumulates information.

Understanding the linguistic features that construe meaning in academic registers is not only relevant to writing clearly and reading for understanding. Structuring texts in academic ways also embeds in them ideologies and ways of thinking that naturalize certain perspectives and exclude others. When experiential and interpersonal meanings are construed in ways that are not foregrounded, they also are not easily questioned or challenged. This is why it is important to understand the ways that grammatical choices construe meanings of different kinds, and why a deep understanding of the role of language in schooling can facilitate the participation of students who may not otherwise be able to understand the range of meanings that a text presents.

For example, in environmental education texts, expressions such as *habitat loss* and *destruction of the rainforest* are nominalizations that hide the social actors in the relationship between *habitat* and *loss* and *destroy* and *rainforest*, but at the same time enable the terms to be used as building blocks in constructing explanations and arguments related to these phenomena (Chenhansa & Schleppegrell,
1998; Schleppegrell, 1997). Information such as agency (who did it?) is lost through the distillation of ideas that results from nominalization and other strategies of academic writing. Representing these nominalizations as full active clauses requires expression of grammatical agents, while the nominalized technical term allows the agent to be suppressed. Suppression of agency in the clause also suppresses information about responsibility for environmental problems, leaving students unclear about why these problems exist.

In history texts, too, as Unsworth (2000a) has shown, grammatical metaphor effaces the writer as interpreter and disguises deductions as facts. He provides an example of how interpretation is implicit in the sentence: Joining the League of Nations was a clear sign that the country wanted to be part of the rest of the world (Unsworth, 2000a, p. 259). The predicate was a clear sign avoids the explicit evaluation that might have been accomplished with a verb like showed, demonstrated, or proved (Joining the League of Nations proved that the country wanted to be part of the rest of the world). Instead, the noun sign, modified to make it positive (clear sign), enables the writer’s role as interpreter of events to be obscured, presenting this historical move as “fact” in a relational clause rather than as something that is being argued by the author. Martin (2002) also demonstrates how the nominalized language used in history to manipulate agency makes it possible to provide explanations that are less accessible to critique.

As Rothery (1996) points out, language does not just correspond to reality, it construes reality. Lexical and grammatical choices construe particular interpretations and ways of thinking about the world. It is in this sense that grammar and “content” develop together. To learn the concepts of advanced literacy is to learn the ways of using language required for talking and writing about those concepts. It is through the language of schooling that the concepts are construed, and through the development of control of academic registers that students develop consciousness about the concepts of advanced literacy.

**THE CHALLENGES OF ACADEMIC REGISTERS**

While academic registers are functional for their purposes, they also pose serious challenges to students as they construe uncommonsense knowledge in unfamiliar ways. Reading and writing academic language is difficult. In science, for example, students need to recognize that texts are concerned with the presentation of processes in the abstract, with the focus on the process itself, not on the human parties who may be involved with the processes. This recognition then enables students to explore the features of texts that suppress information about agency and enable interpersonal meaning to be made in ways that appear objective.

In history, alternation between definite and indefinite past and between past and present makes it hard for students to establish a clear placement of events in time. The abstraction of participants and events, the logical, rather than tempo-
ral, organization, and the construal of significance in evaluative lexis and clause structuring present challenges to students unfamiliar with academic registers and make it difficult for them to understand the meanings being constructed. They need to be able to recognize when consequential meanings are realized in temporal conjunctions and deconstruct the implicit interpretation that draws on grammatical resources of various kinds.

Academic registers are dense, with information presented in very different ways from the ways meanings are construed in everyday language. Halliday (1993c) describes this grammar as “prepared to throw away experiential information, to take for granted the semantic relations by which the elements are related to one another, so that it can maximize textual information, the systematic development of the discourse as a causeway to further knowledge” (p. 119). In other words, nominalization and grammatical metaphor remove the explicit conjunctive relations and suppress grammatical agency in order to condense information in highly structured ways. The expanded nominal groups that are typical of school-based texts allow the writer/speaker to take a notion that has already been presented and elaborated at length and present it again as a technical term representing knowledge which is now held in common between speaker/writer and hearer/reader. This means that texts can be presented more economically.

At the same time, though, when experiential information is lost, the economy of the text also results in less explication of each concept that is presented. Information can be lost through the condensation and distillation of ideas that accompanies nominalization and other strategies of academic writing, as each move to compact information results in some loss of meaning. Vande Kopple (1992) compares different types of clausal structures in science research reports, demonstrating that the premodifying elements in nominal groups, common in scientific writing, are more economical than the typically more elaborated postmodifiers, but the premodifiers do not include the same amount of information. Condensed clauses can therefore create ambiguity, as the more economical presentation occurs at the expense of some clarity of meaning. Long, nominalized sentence subjects, for example, bear a heavy information load, and require that readers make inferences about the relationships between adjacent clauses that may not be realized explicitly. Readers need to be able to translate nominalizations into more congruent forms to uncover the concrete events and actors that have been construed in abstractions. Those unfamiliar with the register may not find it obvious what is missing. And those familiar with the register may not be aware of the challenges that “de-nominalizing” academic discourse poses, as the source of the missing information has to be recovered either from previous text or from sources outside the text.

To read the texts of advanced literacy, students have to recognize when arguments are being made and the degree of commitment of a writer toward those arguments. Students are also challenged to uncover the implicit interpretation and bias that academic registers enable. Deconstructing texts to identify agents and
those acted upon can give students insights into the preconceptions with which the events are approached and examine what is naturalized when history is written, for instance. Students have to learn that the presentation of some social actors in passive, non-agentive roles does not mean they were not historical agents in the events. To write the texts of advanced literacy, students need to develop expertise with the genres of various disciplines and the register features of the language of schooling, moving from writing procedural recounts to constructing theoretical explanations that draw on technical lexis and grammatical metaphor in relational processes that construe causal and consequential relations. Grammatical metaphor is difficult for students to deal with; typically it does not emerge in students’ writing until the secondary school years (Christie, 2002b; Halliday, 1993e, 1993g).

The tension between economy and explicitness in academic registers can make inexperienced writers reluctant to adopt grammatical strategies that appear to be less clear. Developing writers typically use only a small subset of the grammatical features that are available, perhaps hoping that using a limited set of lexical and grammatical resources will result in fewer grammatical errors (Schleppegrell, 2002). But this puts them at a disadvantage when they need to engage in explanation, discussion, or argument. Developing writers have difficulty with many functional moves in writing: stating assumptions, making comparisons, stating causal relationships, and other similar tasks. Rose (1989) describes the frustration of university students from non-mainstream cultures who write in ways they consider “academic.” Lacking knowledge about how to do this effectively, they rely on folk notions or intuitions about academic registers that lead them into errors. Rose suggests that these students are aware of the need to write in an academic style, but that they do not know the strategies to apply to achieve the interpersonal stance and text structuring that is valued in academic writing.

Students need to use language in ways that enable their participation in the value systems of the discourse communities they are being socialized into through their reading and writing. Getting control of the grammar that construes evaluation and interpersonal meaning in objective ways that realize authoritativeness is difficult. If knowledge is not scaffolded through interaction in school lessons that makes explicit the ways that language is used to construe disciplinary meanings, then some students will get access to the meaning potential, but others will not (Veel, 1999). Differences in students’ language experiences and in the social and pedagogical contexts of different classrooms result in differences in students’ access to learning.

**CONCLUSION**

Students encounter reading and writing tasks in the contexts of particular subject areas. Disciplinary demands for reading and writing steadily increase from middle school to secondary school and beyond. Each subject area has its own expected
genres and its own typical patterns in the use of grammatical features. This makes it important to understand the specific literacy demands of different disciplines. As this chapter has shown, the features of the academic registers that realize the genres of science, history, and other disciplines can be specified at a general level. These register features are functional for accomplishing the goals that school-based texts have; the presentation of information authoritatively and structured in ways that are expected in the particular disciplinary context. Where the needed presuppositions and background knowledge have been established, academic registers are effective ways of presenting information clearly and concisely.

The language of science is functional in its use of technicality and grammatical metaphor to construct theories, and in its use of objective modality to incorporate evaluation. The language of history is functional in its use of abstraction, internal conjunction, and grammatical metaphor to construct interpretations. Other subject areas also have their distinctive patterns that realize their particular disciplinary goals and methods. Understanding the features of these registers is important for teachers, students, textbook authors, and researchers who want to better understand the development of students’ language and knowledge. In addition, it is crucially important for bringing students to a level of critical literacy that can enable them to recognize what is being naturalized in school-based texts and challenge ideologies that may not work in their interests. Recognizing the functionality of academic registers for construing knowledge and the challenges that these registers pose for students unfamiliar with them can lead to pedagogical interventions which make the language of schooling more accessible to all students. Chapter 6 explores the pedagogical implications of this work and suggests further directions for research.
Language Development in School

By understanding the functional organisation of language, we are enabled to explain success and failure in learning through language... We can also see how far the fault lies in the learner and how far it lies in the language that is being used to teach.

—Halliday and Hasan (1989, p. 45)

This book has described the challenges of schooling in linguistic terms. The register differences between the language of everyday interaction and the language of schooling have been shown to emerge from the different contexts of everyday life and of "schooling" in the broadest sense. Some major genres of schooling and the subject-specific language demands of some disciplines have been presented and discussed, using the tools of systemic functional linguistics. Understanding the functional meanings of linguistic resources strengthens our analysis of language development and use by bringing together the meaning-making that is fundamental to language development with an understanding of the structures through which meanings are realized. A functional focus on the ways language construes the context of schooling, realizing the kinds of meanings that schooling requires, offers important insights for teacher preparation and for research in language development.

In this book, the context of schooling has been broadly characterized as a field where display of knowledge is valued, a tenor that is authoritative, and a mode in which texts are organized to present information in highly structured ways. The linguistic features that realize that broad context in a variety of text types have been described. This linking of context and text in a grammatical framework has been offered as an alternative to the characterization, reviewed in chapter 1, of
academic language as explicit, decontextualized, and cognitively demanding. The research on language in school reviewed in chapter 2 supports the functional descriptions developed in chapters 3 through 5, where the lexicalization of referents, explicit marking of topic shifts and formal structure described in chapter 2 have been reinterpreted in functional terms to show the role of nominal groups and different approaches to clause and text structuring in realizing the context of schooling.

Students who encounter academic registers in contexts outside of school may be able to draw on this exposure and the implicit knowledge about language it engenders for success in school-based tasks. Students from other backgrounds, however, may need an explicit focus on the form language takes to raise their awareness of how different grammatical choices are functional for achieving particular goals in their writing and for analyzing the points of view that are naturalized in the texts they read. In suggesting a focus on grammar and language form, it should be clear that the traditional ways of presenting grammar are not the ones intended. Focus on grammar does not mean learning the “parts of speech” in isolation from the texts they create and the meanings they make. A functional grammar perspective highlights the role of grammar and lexis in construing the kinds of meanings that students need to make to be successful in school and to be able to participate as adults in the institutions of modern society.

This chapter draws some implications from the analysis of language in chapters 3 through 5. It discusses issues in language pedagogy that are illuminated by the functional approach and suggests that a functional focus on language can help students develop the facility with language that can enable them to participate effectively in a wider range of contexts. Taking the perspective that learning new registers has much in common with learning new languages, this chapter argues that students need to be introduced to the new ways of using language expected at school through meaningful experiences that give them opportunities to use language in new ways. In addition, an explicit focus on the linguistic features of the language of schooling can raise students’ awareness of the choices available to them for writing the texts of schooling and can help reveal the layers of meaning in the texts they read. This chapter also outlines new directions in research on the language of schooling that can bring a theoretically motivated analysis of language to educational issues.

**ISSUES IN LANGUAGE PEDAGOGY**

The theory that informs current educational practice is often constructed as a debate between proponents of mutually exclusive views that are often set up in terms of “meaning” versus “form.” Such narrowly articulated controversies, however, fail to provide teachers with guidance about effective ways to focus on language as students read and write in various school subjects.
Discussions of writing pedagogy, for example, are often polarized around a distinction between “writing as product” and “writing as process” approaches (see Kroll, 2001, for an overview). Supposedly the “product” oriented pedagogy is concerned only with the text the student produces and pays no attention to the process and stages that the writer and text are engaged in. On the other hand, “process” writing approaches are said to be concerned only with assisting students in brainstorming, drafting, revising, and editing without teaching form or grammar. But this distinction presents a false dichotomy. Both process and product are important in writing instruction. Without a focus on form and attention to different register expectations, process-oriented approaches can easily become trivialized. Students may not be pushed to attempt unfamiliar genres if they are only encouraged to be expressive and write on whatever topics they wish. This deprives students of opportunities to learn more than they already know and means that students are not prepared for writing in all subject areas. On the other hand, focus on product alone, without consideration of the contexts of writing and the process through which a text is developed, can result in formulaic responses that do not make the full range of meanings that the student is capable of. Products and processes need to be considered together, with the product of the process in focus throughout as students are challenged and assisted in writing new genres with more advanced register features.

In teaching reading, educators are similarly presented with a polarized controversy regarding the appropriate approach, with debates about whether to teach phonics or “whole language” (see Ediger, 2001, for an overview). The phonics movement assumes that learning the sound–letter correspondences will make good readers, and the tasks that are typically required of students in learning to read through phonics approaches include an abundance of worksheets, short answers, and activities that require little production of extended discourse. Whole language approaches, on the other hand, stress the importance of a meaning-based approach to reading and argue against a focus on form. But neither of these approaches prepares students for reading the difficult texts they encounter in the later years of schooling. Phonics approaches can trivialize the reading process by reducing reading to decoding. Whole language approaches, without a focus on the language in the text, can deprive students of valuable tools for understanding. In either case, teachers who have been prepared to use these approaches may not be equipped to raise students’ awareness about the linguistic features that construe different kinds of meanings in different types of texts.

The emphasis in schools is too often on mechanical writing tasks such as spelling tests and grammar drills, while academic discourse forms that truly lead to success at higher levels of schooling, such as well-developed explanations, discussions, and arguments, are not explicitly presented and analyzed for their language features. In fact, much is left implicit in issues related to language. Outside of English classes and writing programs, the typical writing assignment is a first and final draft, written in class. Students often receive instruction about writing only
after the writing tasks are completed, meaning that writing is more often assessed than taught (Applebee, 1984a). Teachers’ feedback on student writing tends to focus on correction of errors at the sentence level or generalized comments on content, and writing is often corrected by teachers in ambiguous and inconsistent ways (Romaine, 1984). This is highly problematic in terms of language development, because even when “errors” are corrected, students’ writing may still not realize the academic registers that are expected in the genres they write (Schleppegrell, 2002).

Writing courses that take process approaches often focus only on personal genres, especially in courses for developing writers. Teachers are encouraged to draw on students’ personal experience and allow them to use the registers they are comfortable with, on the grounds that pushing students to write in an academic style forces them to conform to models that are not of their cultures and that do not bring out their own personalities (e.g., Spack, 1993), and on the grounds that through frequent opportunities to write about what they are interested in, their writing will develop and mature. But studies of students’ writing do not support this (e.g., Hinkel, 2002; Martin, Christie, & Rothery, 1987). For example, when Aboriginal children in Australia were encouraged to choose their own topics for writing tasks, they chose a narrow range of familiar topics, such as visiting friends, hunting, sporting events, movies, and TV (Martin et al., 1987). They invariably produced recounts—simple sequential retelling of events. So instead of encouraging writing development, this approach actually limited their development. Students typically work with a very narrow range of genres in the early grades, getting little experience and practice with the more complex genres that will be demanded of them in middle and secondary school and beyond.

The most dominant form of writing in the lower grades is personal writing, as students are most commonly asked to write narratives, including recounts. Factual or analytical writing is rare. Articulation from the early grades into the late grades is inconsistent and does not systematically prepare students for what they will be expected to do at high school and beyond, building from the more narrative genres to the more analytical. In a study of writing in secondary schools, Applebee (1984b) found that weak writers and second language writers typically got few opportunities to write analytically. Poorer writers were asked to write in personal and imaginative modes and were expected to do only about half as much factual writing as better students. Better writers were assigned a higher proportion of information-based writing. This means that the writers who needed the most help were not engaged in tasks that gave them experience with academic registers.

In critiquing ESL writing instruction that is modeled after process approaches designed for native speakers, Hinkel (2002) argues that such approaches ignore issues related to the development of grammar and lexis. She demonstrates that the kinds of writing assignments students are given influence the types of texts they write. The assignments that ask for personal experiences lead to personal
narratives or essays about students’ beliefs or opinions. When given such tasks, students use examples rather than argumentation, relying on conversational rather than academic registers. Hinkel argues the need for a focus on the textual functions of grammatical structures in writing instruction.

Teachers need to create opportunities for students to write different types of texts and help them focus on how those texts are most effectively constructed so that students can extend their repertoires and make register choices that realize new and more challenging genres. As Shaughnessy (1977) notes, students do not choose a style of discourse, but rather are confined to particular styles because of their unfamiliarity with academic writing. All students need to be able to address questions directly, defend those parts of their writing that are open to argument, and engage in other such academic language moves. These are not abilities that students will develop without assistance, as performing these functions requires use of academic register features that are not part of oral language competence and that are not developed through personal and narrative writing.

For the past generation, pedagogical approaches for both second language learners and native speakers have de-emphasized any focus on form. This philosophy against focus on form is most evident in approaches to second language acquisition that base themselves on Krashen’s Input Hypothesis and Comprehensible Input constructs (Krashen, 1982). This popular theory suggests that all that students need for language learning is plenty of comprehensible input, and that any focus on grammar is counterproductive. This theory was initially a reaction to an ineffective pedagogy focused on learning grammar rules. But in devaluing any focus on form, this approach ignores the differences between interactional registers and academic registers and the role of language in construing meanings in school subjects. Students with fluent oral English, but little experience outside of school that leads to development of academic language, may need explicit focus on form in the context of purposeful learning of the registers and genres which enable them to participate in today’s complex society.

Students may be fluent in spoken English and still lack basic resources for reading and writing academic registers (Cummins, 1980). When such students’ reading and writing performance is weak, they are at risk of being placed in inappropriate instructional programs. If it appears that their English is fluent, their problems may be viewed as cognitive; that they lack the intellectual skills they need for success at school. Students are often tracked from the earliest years into programs that provide differential access to advanced literacy. Rose (1989) illus-

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1 Many scholars have focused on the importance of narrative in education (see, e.g., Christie, 1986; Crowhurst, 1980; Kress, 1994; McCarthy & Carter, 1994; and the 1993 thematic issue of Linguistics and Education v.5 n.2); the point here is that students need to move beyond the personal genres to gain skill in analytical writing tasks. This is especially crucial in light of reports like Rothery (1996), who found, in an analysis of more than 2000 texts written by primary school children, that personal genres constituted more than 77% of all texts the children wrote. Factual genres (report, exposition, literary criticism), constituted only about 18% of the student texts.
brates, for example, how university students classified as “developmental” are placed in courses where they work through grammar exercise books and are given no experience with the critical writing tasks that their regular courses will demand. These low-level courses focus on discrete skills that the students seem to lack, even while the students often have well-developed reasoning abilities which the courses never allow them to demonstrate. At the same time, students who display their abilities in more expected ways go into programs that allow them to further develop their linguistic resources and demonstrate their abilities through creative and challenging assignments.

“Process” vs. “product” in writing instruction and “phonics” vs. “whole language” in reading instruction are debates that distract educators from the key issues in developing students’ advanced literacy. Christie (1998a) argues that these dichotomous ways of thinking about language development fail to provide adequate guidance for teaching because both lack a sufficient understanding about differences between written and spoken language. Without an understanding of the differences between ordinary interactional language and the language of schooling, teachers are inadequately prepared to address the challenges of the registers of advanced literacy. Literacy learning goes on throughout one’s lifetime and is never finished. Approaches that reduce literacy development to the learning of discrete elements like phonics, or expect students to be able to get meaning from text without attention to the forms that construe the meanings, lack the crucial component that functional approaches provide; a way of introducing students to the lexical, grammatical, and discourse features of academic registers that make the technical and specialized meanings that enable students’ participation in advanced literacy contexts.

**LEARNING THE LANGUAGE OF SCHOOLING**

The notion of cultural incongruence or mismatch has been used to explain students’ failure at school, but it is not enough to identify mismatches between the home and school and allow students to work in the genres of their home cultures. It is important to draw on the language students bring to school, but it is also necessary to help them develop new ways of making meanings that call for new forms of expression. Chapter 2 showed how middle-class families apprentice children into ways of using language which will later be highly valued, but it also argued that it is not reasonable to expect that this kind of experience can be provided by teaching parents to adopt the strategies that researchers see middle-class parents using. Ways of making meaning vary across social groups in ways that are functional for those social groups. The contexts and power relationships are different for people of different social and cultural backgrounds, and forms of interaction that do not correspond to deeper meanings and roles of participants are unlikely to be successful. So attempts to replicate middle-class
parents’ approaches are unlikely to work. Instead, schools need language development approaches that provide meaningful experiences with new subject matter and enable a focus on the linguistic features of the texts students read and write about that new experience.

Development of academic registers is a different task for students from different backgrounds. For some, the language expectations of schooling fit seamlessly into their home and community language styles, providing further reinforcement for abilities that they are developing in a wide range of social contexts. Their out-of-school experiences socialize them into the ways of using language that are valued at school, so they can rely on their intuitions about language to achieve success. But other students have not had the kinds of social experiences that lead to this kind of understanding. For these students, learning academic registers is like learning a second language in a context where little reinforcement is available outside of the classroom. The learning of new registers, like learning a second language, requires appropriate input, opportunities for interaction and negotiation of meaning, and relevant focus on the form that language takes in different settings and as it is used for different tasks. But classroom contexts, as currently constituted, are seldom sites where such language development can flourish.

The ability to use the grammatical and lexical strategies of academic registers in writing and to recognize the meanings they make in the texts they read does not just come naturally in students’ ordinary language development. Socialization into new registers depends on having interaction that is meaningful in the new contexts where those registers are functional. This is similar to what is needed in early first language development, where what is most important is a consistent attempt by adults to understand the meaning intentions of the child and a willingness to make those intentions the basis for further conversation (Wells, 1985). Second language acquisition research also shows that language development requires meaningful and purposeful interaction with an interlocutor who is willing to pursue the meaning-making moves of the learner (Ellis, 1994; Larsen-Freeman & Long, 1991).

Our schools currently serve many second language learners, speakers of non-standard dialects of English, and other students with little experience outside of school with academic ways of making meaning. These students need meaningful input and opportunities to engage with texts and tasks in purposeful ways if they are to develop new language resources. They need interaction with knowledgeable interlocutors in ways that enable them to explore and negotiate meaning. And finally, they need a pedagogy that scaffolds language learning and learning through language. None of these conditions is typically available to the learners in our schools.

Classroom interactional patterns have been the focus of much research, and a common pattern of whole-class teacher–student interaction, the initiation-response-evaluation (IRE) sequence (Sinclair & Coulthard, 1975), also called the initiation-response-follow up (IRF) sequence (Wells, 1993), has been criticized
as a barrier to providing students with the negotiation of meaning that promotes language development. During these events, the teacher asks questions and evaluates students' responses as together they construct a particular interpretation or understanding of classroom content. Such interaction is criticized on several grounds: that most responses by students during this activity are single words or short phrases, that typically only a limited number of students volunteer to participate, that instruction and practice in formulating linguistically elaborated responses is typically not provided, and that the teachers' interpretations are always dominant, as they control clarification questions and which topics introduced by students will be followed up in subsequent discussion, limiting students' opportunities to negotiate meaning or pursue their own questions or ideas (Mehan, 1978; Schleppegrell & Simich-Dudgeon, 1996).

Other researchers have looked at this activity differently, showing that the IRF sequence can function in different ways in the classroom. Whether or not this participation structure is effective in helping students learn depends on how the teacher uses it, and at what point in the lesson. Wells (1993) and Christie (1998b, 2002a) both point out that this discourse form can contribute to the development of students' understanding of language and content when teachers are clear about its purposes and goals. In the middle-school science classroom that Christie (1998b) reports on, the IRF sequence actually enables the development of scientific discourse as it provides a context in which teacher and students together reconstrue the knowledge they have developed in technical and grammatically metaphorical language. Christie traces the development of the "text" in this unit from the initial topic, "why the parts of a machine work" to its reconstrual as "mechanical advantage." The curriculum unit builds students' linguistic and scientific knowledge through hands-on experimentation and teacher explanation. The IRF sequence occurs at the point where the students need to construct a taxonomy that will inform the collaborative science activities they are about to engage in. The IRF interaction scaffolds the development of new scientific knowledge using new linguistic forms, and small group work then provides opportunities for students to experience and discuss together the new concepts they are learning. The unit culminates in oral and written reports in which students draw on academic register features to display the new knowledge they have developed. So the IRF sequence can play a crucial role in joint construction of patterns of use of the technical language that is necessary for student learning when it is structured to help students reconceptualize knowledge they have developed through experience as formal knowledge construed through new linguistic resources (see also the discussion in Christie, 2002a).

The kind of language students hear and read at school is also an important element in promoting academic language development. Often students whose reading skills are weak are given simplified texts that do not present the same content their grade-level peers are learning. Reading a simple narrative about the experience of a Civil War soldier, for example, when the grade-level standards call for
students to understand the war’s causes, deprives the weaker readers of access to learning opportunities. From this perspective, texts used in instruction need to be good examples of real genres, “not just something enjoyable to engage children or a way to practice decoding” (Williams, 1998, p. 41). This suggests that teachers need to be conscious about the features of the texts they teach and engage in activities that make those texts meaningful.

Teachers also need to use academic registers and help students understand new ways of using language. Students cannot learn academic registers and academic content when the spoken explanations they hear lack the technicality they need to develop language resources for disciplinary work in different subject areas. Khisty (1993), for example, in an ethnographic study of middle-school mathematics instruction, demonstrates that little real “math” language was actually used in the classrooms she studied. Teachers mainly demonstrated procedures for performing calculations, and expected students to memorize these without discussion of conceptual factors in learning math or interaction about math concepts. The language that teachers used lacked technicality, as they attempted to express difficult mathematical concepts in words and phrases that carry little math meaning and can, in fact, be ambiguous. For example, in asking a student to simplify the fraction 16/10 to get the answer 8/5, the teacher asks “Can you go down any lower?” (Khisty, 1993, p. 646). Students need critical discussion of concepts through academic registers that construe the meanings they are expected to learn.

Content knowledge and skills cannot be separated from the linguistic means through which that knowledge and skill is manifested. This is recognized to some extent by research in English as a second language pedagogical contexts, where a focus on content-based language has been promoted (Chamot & O’Malley, 1987; Mohan, 1986; Snow, Met, & Genesee, 1989). Approaches to content-based language instruction can be enriched through an understanding that language and content are never separate; that “content” in school contexts is always presented and assessed through language; and that as the difficulty of the concepts we want students to learn increases, the language that construes those concepts also becomes more complex and distanced from ordinary uses of language. Such an understanding implies that focus on language itself is important for helping students learn the concepts of school subjects.

Christie (1989) points out that all teachers are teachers of language in this sense, “for language is the behavioral resource of central significance in the forms of learning for which schools are particularly responsible” (p. 198). She suggests that “where curriculum activities are designed so that children . . . explore new experiences and acquire new information, they are encouraged to employ their linguistic resources, thus mastering an expanding range of new registers” (p. 197). Classrooms can provide contexts for language development when students are engaged in exploring new ideas and content through meaningful experiences and activities and then assisted in developing spoken and written texts that draw on features of academic registers that are functional for presenting and discussing the
new ideas and content. Teachers need to be aware of and explicitly teach the strategies they expect students to use in classroom interaction, helping students develop skills of questioning and discussion that enable them to develop linguistic capacities that display their knowledge. If students are unable to draw on the meaning-making resources of academic registers, they are unable to demonstrate what they know.

**GRAMMAR AS RESOURCE FOR LEARNING**

To effectively help all children develop competence with the registers and genres that are powerful for learning in school, teachers need to recognize, build on, and expand the language resources students bring to school to help them develop new ways of using language to think about the world. Both language and thinking develop through meaningful participation in tasks that promote new ways of thinking and using language. This means that the cognitive development that accompanies particular academic tasks depends on the way those tasks are embedded in their social contexts and the purposes to which the new skills are put. Language is the central tool for cognitive development in school.

Teaching should be seen as what Christie (1991) calls a “deliberate” act of instruction to achieve a set of goals. Fundamental to teaching is the notion of scaffolding—what Martin (1999) calls “guidance through interaction in the context of shared experience” (p. 126). Scaffolding requires a visible pedagogy (Bernstein, 1996; Martin, 1999) that provides teachers with expertise and makes the criteria for success explicit to students. For scaffolding to be effective in promoting language development, teachers need to be aware of what they are scaffolding and what they are aiming to achieve. From a linguistic perspective, recognizing that particular texts are valued in particular social contexts, such as schools, suggests that schools need to provide opportunities for students to develop an understanding of what those valued texts achieve and how the social meanings they make are construed in grammatical and lexical choices.

Too often, however, students experience an invisible pedagogy, where teachers manage classroom tasks and interaction without being clear about the content to be learned and the criteria for success. Invisible pedagogies do not push students to move beyond what they already know. For example, Christie (1999b) describes a language arts curriculum where students are expected to read literature and adopt a position that is their “own” in response to it, without any explicit analysis of the texts they are reading that would reveal the many and varied embedded cultural meanings. Such an implicit pedagogy puts at risk all but those students whose socialization has prepared them to relate to the embedded meanings, those students who have opportunities outside of school to engage in the kind of discussion and critique that prepares them for such tasks in school.
Explicit pedagogies foreground the patterns and relationships in the language and practices being taught. It is not enough just to have “standards” that students need to meet. Teachers need to be informed about the linguistic challenges of those standards and have tools for unraveling the linguistic complexities that they represent. Without explicit instruction and clear criteria for success, when students fail, the failure is easily placed on factors such as ability, family background, or motivation (Martin, 1993a).

**Recognizing Genres**

Students may lack experience with school tasks on several levels. They may not understand the goals and purposes of the tasks, or they may not understand what the school values in its expectations for language use. Even when they understand the goals and purposes, they may not understand how such goals and purposes are relevant to their lives. Knowledge develops in particular contexts related to particular purposes, and the specific context and purpose shape the knowledge, and linguistic resources to construe that knowledge, that students develop. For that reason it is especially important that instruction in language be contextualized through authentic and purposeful activities.

Australian researchers have promoted a genre-based pedagogy (Christie, 1997; Martin, 1993a; Rothery & Stenglin, 1997) that takes an explicit approach to literacy instruction with a goal of providing equal opportunities for all students to read and write the genres that allow them to participate successfully in school, in science and technology, and in other institutions of society. Cope and Kalantzis (1993) characterize this approach as “being explicit about the way language works to make meaning . . . engaging students in the role of apprentice with the teacher in the role of expert on language system and function . . . [with] emphasis on content, on structure and on sequence in the steps that a learner goes through to become literate in a formal educational setting” (p. 1). The functional grammar described in this book and in other work on systemic functional linguistics grounds the genre approach in linguistic elements that realize the genres, so that they are not taught as formulaic text types but as social processes that are realized in certain language choices.

Students need knowledge about the social purposes and the linguistic features that realize those purposes in different genres. Because each discipline has evolved a way of using language that interprets the world in its own terms, students need to learn the language of the different school disciplines if they are to be effective in doing school-based tasks. This means they have to engage in producing a range of genres from the early years. Children can be introduced to factual writing from the beginning of school if effective contexts are developed. Factual genres have their roots in language whose function is to explore the world, so the capacity to read and write such genres needs to be developed in contexts where students are developing knowledge about unfamiliar concepts. Ability to
write factually or analytically will not develop in the same contexts in which personal writing develops. This means that students need social experiences that engage them meaningfully in activities for which reading and writing a range of factual and analytical genres is called for.

Teachers also need to learn to recognize when factual genres are appropriate, as students are sometimes encouraged even to write about scientific topics from a personal perspective. Christie (1985), for example, reports on how a teacher in a science class asks students in early primary grades to write a “story” about the hatching eggs that have been the students’ project. The instruction to “tell a story” misleads the children into a narrative genre which is inappropriate for making meaning in this context. When writing book reports, too, students often write in a narrative rather than analytical genre (Christie, 1986). Much of students’ early writing experience, then, fails to prepare them for the genres that will be expected of them later.

If students are to develop the range of genres expected in school tasks, the challenges in the development of the language resources needed to accomplish those genres must be addressed in the school context. Each genre represents a different cultural use of language and each has its own roots in different cultural experiences. In order for students to learn to use and manipulate each genre for their own purposes, they need to share in the cultural experiences that genre helps construct. Truly understanding and accepting that students need to share in those cultural experiences has major implications for how language can be taught and learned. Students need to be able to participate in the social purposes of the texts and tasks of schooling so that they understand the goals of the tasks they are asked to do and the texts they are asked to create.

Analyzing Language

In order to effectively scaffold the development of different genres, teachers need a clear understanding of the goals of the assignments they give and a means of helping students learn how to write texts that meet those goals. As chapter 2 showed, the context of any particular school task is not the same for every student. Schleppegrell (1998) demonstrates, for example, that when asked to write descriptions in science class, some students write incipient reports, drawing on grammatical resources that present themselves as knowledgeable experts who are authoritatively providing information for a non-present audience, while others write texts that construe more personal contexts as they comment on what they see or what they like. Anderson (1989) also found register differences in the way deaf and hearing college students responded when asked to write about how they felt about writing. All hearing students responded in a similar way, beginning their texts with themselves (I) as theme/subject, foregrounding themselves as writers. They all used it/writing in the clause rheme. The responses of the deaf stu-
Dents were much more varied in their grammatical choices. Only about half chose *I* as the theme/subject of the first sentence, and many of them expanded their initial clauses hypotactically and paratactically, foregrounding related or unrelated topics.

These differences demonstrate the power of register and the need to address attention to grammatical and lexical features, especially with students who may not have experience with academic registers. The point is not that every student must make the same grammatical choices, but when students’ choices do not enable them to accomplish assigned tasks in ways that foreground the meanings in focus, they can benefit from attention to other options available to them. Students’ grammatical choices construe different conceptualizations of the tasks they are assigned as they create different types of texts; texts which are not all valued in the same way. For teachers, understanding the genres they are assigning and the register features that construct those genres can enable them to see writing tasks as processes through which students can express their individuality at the same time their knowledge and opinions are also presented in ways that are valued at school and in society.

Recent second language research also suggests that a focus on form can be important for students’ language development (e.g., Doughty & Williams, 1998; Ellis, Basturkmen, & Loewen, 2001). Informed by a theory of language that is discourse and meaning-based, a focus on language can be brought to learning even as new content is introduced. Students can learn how the close interaction between grammar and discourse organization enables them to create effective texts and develop the diverse voices they need to produce texts for different contexts and situations. By making the lexical and grammatical expectations for academic assignments explicit, teachers can help students make more effective choices in approaching different writing tasks.

With an understanding of the genre and register features of academic tasks, teachers can focus on grammar as a resource for the construction of texts and help students use new resources of the grammar. Information about grammar can be incorporated into writing instruction so that as students follow a process of drafting, revising, and editing, they can be made aware of the features that are especially important for construing meanings in that writing task. Such focus on form shows students how their grammatical choices contribute to the effectiveness of their texts and helps them gain control of their writing and more confidence in their choices.

Rothery (1996), for example, shows how functional grammar can be used to teach students to write scientific explanations. As students read procedural texts that laid out the experiment they were involved in, they identified imperative verbs and sequencing markers and analyzed how referents were tracked. Rothery points out that when the students first wrote reports on the experiments, the texts they produced were procedures, not explanations. It was only when they focused on the linguistic features of explanation that they began to write about how
the process worked rather than how to do the process; learning to structure text in a new way. Rothery notes that it is not easy for teachers to facilitate such learning. “Teachers do not have technical knowledge about the language system, the relationship between text and context, or of child language studies which document the adult’s guiding, scaffolding role in adult/child linguistic interactions, a role which is crucial to children learning language and learning through language” (Rothery, 1996, p. 90). Without such knowledge, as suggested before, teachers may locate the literacy problem in the students’ cognitive abilities rather than in the pedagogy (p. 101).

Lessons can also help students understand how linguistic choices make texts the kinds of texts they are. School textbooks are often constructed in ways that do not make the meanings explicit (Beck, McKeown, & Gromoll, 1989; McKeown, Beck, Sinatra, & Loxterman, 1992), and students need to be able to work with dense and difficult language in order to understand such texts. Explicit analysis of the linguistic structure of texts can help students understand how language construes particular contexts and ways of thinking. The grammatical and lexical elements that are functional for creating texts in school contexts can become an explicit focus of teaching and students can engage in deconstruction of the texts they read to help them understand how the authors have constructed the text to incorporate ideational, interpersonal, and textual meanings through their lexical and grammatical choices.

A functional analysis of language can also inform educators as they prepare texts for students to read. For example, Unsworth (1997) demonstrates that it is possible to identify and specify the features that make a middle-school science textbook explanation about sound waves effective. He shows how the types of clauses selected, use of grammatical metaphor and conjunctive relations, and choice of theme in the presentation of information contribute to clear and effective text. He demonstrates how an ineffective text distorts an explanation of sound waves and creates ambiguity because it does not draw on the constellation of grammatical features that enables an explanation at increasing levels of abstraction. Knowledge about the role of grammatical resources can help educators create texts that better achieve the purposes of schooling.

A functional analysis of grammatical resources also provides a framework for analyzing students’ command of language and identifying the areas in which they need further development. Explicitness about the textual expectations for academic writing is the only means of providing access and achieving fairness in assessment (MacDonald, 1994). Unfortunately, this is seldom done. As Rothery and Stenglin (1997) note about English as a subject area, “the goals . . . are left implicit, or even misrepresented, and . . . students are given virtually no tools for achieving them, [so] it is not surprising that success in English is achieved mainly by students from the middle class who bring with them a rich cultural capital of literacy, field experiences and mainstream ethical positions which they constantly draw on in the classroom” (p. 262).
Tools for linguistic analysis are “precisely the resource which enables learners to develop the means of reflecting on language” (Hasan & Williams, 1996, p. xviii). This capacity for reflection is an important aspect of developing critical thinking and higher level knowledge. Learning the registers that construe school-based social practices gives students tools for adapting those registers to their own social, cultural, and political interests. The values and hierarchies related to academic genres and registers are not obvious or evident without explicit instruction. By implementing an active pedagogy that teaches about the language of schooling, educators can overcome the labels that separate students into different categories and social groups and enable a focus on the common agenda of helping students gain control over the texts that have the power to shape the future that they share.

**LANGUAGE, KNOWLEDGE, AND IDEOLOGY**

The ability to draw on the meaning potential of the registers expected in school-based tasks does more than just help students expand their knowledge of language. It enables them to learn the subject matter of advanced schooling and to think in new ways. Learning is in many ways a linguistic process, and the construal of non-everyday meanings in non-congruent grammar involves thinking in ways that are the content of school subjects and academic disciplines. Painter (1996) suggests that “strategies or processes of learning—classifying, comparing, generalising, making cause–effect links, hypothesising, inferring and so on—all are most usefully seen . . . as ways of mobilising the linguistic resource into text, rather than ways of doing some essentially non-linguistic, non-visible mental process” (p. 53). New ways of using linguistic resources enable students to develop the meaning potential that allows them to participate in the powerful forms of discourse in our society.

A pedagogy that focuses on language as a meaning-making resource puts the priority on helping students use language in new ways, rather than on teaching them “thinking skills” in isolation from content and language. In teaching writing, the focus can be on enabling students to marshal new linguistic resources for organizing and presenting the points they want to make. Shaughnessy (1977) suggests that weak writers often do not lack ideas; instead, they lack knowledge of the discourse organizing strategies and grammatical choices that are needed to produce effective writing. She points out that “not only do [basic writing] students produce essays that are full of points but the points they make are often the same ones that more advanced writers make when writing on the same subject. The differences lie in the style and extent of elaboration” (p. 226). She suggests that the notion that students need to be taught to “think” is based on the belief that the student’s writing problems reflect an inability to conceptualize and that this condition may respond to direct instruction that concentrates on the think-
ing process rather than on writing. She criticizes this view as a confusion of the analysis of thought with the generation of thought, pointing out that it underestimates the intellectual sophistication of the students and does not address their need to learn the ways of writing that are highly valued.

Veel (1997) suggests that academic registers construe “distinctive and favoured ways of thinking about the world; ways which we recognize as ‘scientific,’ ‘logical’ and ‘rational’” (p. 161). Similarly, Lemke (1987) argues that “what we call ‘thinking logically’ is for the most part simply using language . . . according to genre patterns . . . to teach ‘logical thinking’ is simply to teach the uses of these genres” (p. 305). Instruction can help learners gain access to educational discourses of the kind they might not otherwise become familiar with in their daily lives, at the same time providing them with conceptual tools for reflection on language as they engage in activities that help them develop new knowledge. This reflection on language can also help students see how the linguistic choices of writers embed different ideological positions and make certain ways of thinking appear natural. Christie (1999a) suggests that the teaching of a functional grammar “develops a critical capacity to interpret and challenge the ways language makes meanings” (p. 157).

This calls for an active role by educators in raising students’ awareness of the power of the language. In order for students to engage in critical dialogue with institutions and social forms, they need to understand how the ideas, beliefs, and attitudes that make up a world view or a political position are embedded in texts and literacy practices (Hasan, 1996). It is only through such understanding that students can examine the underlying assumptions and messages that promote certain perspectives and hide others. As Veel (1997) notes, “language is constitutive of meaning and social context, not simply a conduit or tool to transmit thought or reality. The language . . . makes possible some ways of thinking about the world and simultaneously prevents, or at least marginalizes, other ways of thinking” (pp. 161–162). Understanding this power of the academic registers enables the meanings they make to be questioned and challenged, and the ideologies that these discourses embed to be understood and critiqued.

Knowledge about academic language gives students access to participation in the social contexts in which new knowledge is shared in the various disciplines. Learning to use academic registers is necessary if students are to make the kinds of meanings that are expected and functional in schooling. Having gained control of the registers, students can then manipulate them and use them to construct the diversity of meanings that reflect their own cultural contexts and goals. Getting control of the academic registers can enable students who are now marginalized to participate in constructing new kinds of meanings. Functional linguistic analysis provides a framework and tools to enable students to develop strategies to analyze the ways language is used in school to serve dominant interests and silence others, and to examine how institutions and social organizations are maintained and reproduced through the use of language.
New kinds of meanings will emerge as students make academic registers their own. All language is constantly in a process of variation and change due to the ways it is used by speakers for social purposes. Different uses of academic registers inevitably contribute to maintaining or challenging the way things are. Knowledge of grammar, when seen from this perspective, is a form of social knowledge that can help students gain control over the valued genres in our society and, by participating in those genres, contribute to the social changes that are necessary for true equity of opportunity in schools and beyond. Developing the ability to participate in the texts and contexts of schooling gives students the choice to challenge or support current institutions and social forms as they come to understand how language functions to establish and maintain social practices and to articulate different ideological positions.

CONCLUSION

In school contexts, students come to new knowledge through language. The dense and abstract language characteristic of the texts of advanced literacy construes the specialized and abstract knowledge that students are expected to develop as they move into secondary school and higher education. The linguistic challenges of schooling come from the specialized ways that language construes experience and social roles simultaneously in the densely structured texts of various subject areas. As demonstrated in this book, the register features of school-based tasks such as expository essays, and of science, history, and other disciplines, are functional for their purposes. These features enable the language of schooling to make the disciplinary meanings through which knowledge is shared and developed. A greater awareness of the linguistic basis of this meaning-making can broaden participation in the many contexts of learning that are realized in the language of schooling.

This book has presented tools that can make visible the means by which language construes meanings in the texts of schooling. Recognizing the meanings in the grammatical choices reveals the basis for valuing certain ways of using language. In addition, the tools of systemic functional linguistics provide a means by which teachers and students can focus on language in functional ways that make explicit the different kinds of meanings that texts construe, providing a theoretical link between language and context that can help teachers and students recognize the functional value of linguistic choices. Helping students understand how different forms construe different meanings gives them more choices about how they represent themselves as writers and gives them tools for getting meaning from the texts they read.

This book has drawn on research from a range of theoretical and methodological perspectives to show that there are common findings that emerge from the study of language use at school. The value of the functional linguistics per-
spective on these findings is to situate the difficulty of learning academic content in the language through which content is taught and learned, and to see the learning of language and content as inextricably linked, rather than as separate processes. Characterizing the complexity of the language in terms of the clause structures that condense information in the nominal group and call for conjunctive strategies of integration allows us to reflect on the meanings construed in the language in ways that are open to analysis and discussion. The systemic functional linguistics framework provides a metalanguage for talking about language that can bring a unified perspective to findings across a range of studies.

The analyses presented here provide a general description of the language of schooling that is of course only partial and incomplete. More research from the functional linguistics perspective is needed to provide a deeper understanding of the challenges of the language of schooling; both the challenges of the genres and the challenges of developing facility with the register features. More analysis of the functional uses of language in the context of particular genres can contribute to better understanding of the ways that grammatical elements are employed in the construction of spoken and written texts. In particular, we need a better understanding of the linguistic demands that new educational standards and examinations present at different levels and in different subject areas.

This research also needs a pedagogical dimension, examining when different genres can be introduced, how best to introduce them, and studies of the development of students’ linguistic awareness about them. Students who are still developing academic registers make grammatical choices that are different from those made by more proficient writers, producing a different structure of information from what is expected. Understanding the challenges of the later years of schooling is important for enabling students to go beyond initial literacy to work with the dense, abstract, and technical texts of advanced literacy.

In addition, research is needed on how teachers develop an understanding of the functionality of language. Teacher education programs are not grounded in the linguistic basis of learning, nor do they typically prepare teachers to help students understand the linguistic challenges of their subject areas. More research is needed on ways of preparing teachers to focus on how language construes meanings in the disciplines they teach. All teachers need strategies for talking about language features; research is needed to develop programs that begin to reach teachers for whom language has not been a focus of attention. And to accomplish these goals and to engage resources for research, it is also important to expand the awareness of educational administrators, teachers, and researchers about the role of language in education.

Greater awareness about the linguistic expectations of schooling has the potential to bring about new ways of thinking about what is valued at school. Making the expectations of schooling explicit is a way for educators to examine those expectations. Analyzing texts and tasks and evaluating their effectiveness
for the purposes of schooling can help make educators more conscious of the real expectations that underlie learning activities and may lead to a reassessment of what is valued and encouraged. Research on standards and other assessment issues from a functional linguistics perspective can lead to new pedagogies that integrate language development into disciplinary learning in ways that acknowledge the linguistic challenges.

The linguistic framework provided by Halliday’s theory offers tools for expanding the awareness about language of all those engaged in education and other social processes. As a theory of language that demonstrates the close link between the contexts of language use and the kinds of spoken and written texts that emerge from those contexts and in turn shape those contexts in particular ways, it can add a dimension to the explanations that sociolinguistics, applied linguistics, and educational linguistics offer for understanding issues of language and learning. Adopting this way of talking about and analyzing grammatical forms and discourse structures offers a perspective within which a broad range of researchers can engage in discussion about the role of language in social contexts of various kinds.


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