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Developing academic literacy involves learning valued content and rhetoric in a discipline. Within history, writing from primary documents to construct an evidenced interpretation of an issue requires students to transform both background and document knowledge, read and interpret historical documents, and manage discourse synthesis. The authors examine the potential of the Advanced Placement Document-Based Question as constructed and presented by an exemplary teacher to engage students in historical reasoning and writing. The authors analyzed how five students responded to four document-based questions over a year, tracing how organization, document use, and citation language indicate the degree to which writers transformed and integrated information in disciplinary ways. Students moved from knowledge telling (listing period and document content as discrete information bits) to knowledge transformation (integrating content as interpreted evidence for an argument). Students had difficulty learning to handle the complex layers of the task. The authors discuss how instruction might mediate this complexity and promote academic literacy.

Writing From Primary Documents

A Way of Knowing in History

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Directions: The following question requires you to construct a coherent essay that integrates your interpretation of Documents A-H and your knowledge of the period referred to in the question. In your essay, you should strive to support your assertions both by citing key pieces of evidence from the documents and by drawing on your knowledge of the period.

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Beth, Karl, Penny, Marilyn, and Ted—five students in Ms. Sterling's Advanced Placement American history class—responded over a school year to a series of document-based questions that began with these general directions. Understanding what this task involved and how these students responded is informative for several reasons. First, we need to better understand the critical features of subject matter curricula, such as Advanced Placement, intended to engage students in evidenced reasoning through materials, tasks, and discourse of substance and coherence.[1] Second, we need to better understand writing tasks, such as the College Entrance Examination Board's Advanced Placement Document-Based Question, intended to function both as an introduction to disciplinary writing and as standardized assessment. Finally, although Sterling was an expert teacher of history, curricular constraints led her, like many, to invite and expect writing more than to explicitly teach it. In this article, we suggest that it is useful to frame the critical discussion of subject matter writing in terms of its potential to promote academic literacy (Geisler, 1994) in the target discipline. By using this perspective to consider how history was represented in the context of Sterling's class, to examine the nature of this particular writing task, and to analyze the writing these students produced in response to Document-Based Question tasks, we found that students did make progress (albeit unevenly) in mastering the valued content and rhetoric of the discipline of history. Furthermore, by examining what able students learn to do with minimal in-class writing instruction, we identify issues to consider as researchers and educators seek to improve instruction of subject matter or disciplinary writing.

PERSPECTIVES

What story have we to tell?[2] We had students who were assigned broad, deep reading of historical sources; who, in classroom dialogue with their teacher, daily engaged in the interpretation of readings and the construction of evidenced explanations of critical topics, issues, and events; and who, with some in-class coaching, worked out of class to learn the rather complex task of writing from historical sources.

and suggestions. We are also grateful to Elizabeth Odoroff for assistance in data collection and Kate Stainton and Jennifer Merriman Bausmith for various aspects of data collection, preparation, and analysis.

Various theoretical perspectives would highlight different aspects of this story. One telling might emphasize issues related to the similarities, differences, and interactions between reasoning in speech and writing (Leinhardt, 1995; McCutchen, 1984; Olson, 1977; Olson & Torrance, 1981; and especially, Sperling, 1996), or another might stress the nature of writing itself and how students managed this complex cognitive process (Flower & Hayes, 1980; Hayes & Flower, 1980). Other versions might focus on how writing as a mode of learning affected student knowledge (Applebee, 1984; Emig, 1977; Fulwiler & Young, 1982; Gere, 1985; Langer & Applebee, 1987) or how analytic writing focused on task- or discipline-specific knowledge enhanced students' reasoning (Durst, 1987; Greene, 1993; Marshall, 1987; Newell, 1984, 1994). We recognized all these strands in our story but wanted to portray our writers in a particular class, learning a form of reasoning and writing specific to one discipline—that of history. We wanted to be able to examine how speaking, writing, and reading were used to enact history in that class and to analyze cognitive components of the task and process of document-based writing from within the context of disciplinary discourse. Our primary aim was to explore what is involved in writing from primary documents and in learning to do so, rather than to examine empirically the question of whether students learned more history by writing from documents.[3]

To construct our account, we drew on recent, more contextualized or discipline-based conceptions of writing (Bazerman, 1988; Flower, 1994; Geisler, 1994; Herrington & Moran, 1992; Joliffe & Brier, 1988; Langer, 1992; Walvoord & McCarthy, 1990; Witte, 1992) where reading, writing, and reasoning are seen as acts, processes, and forms that are situated or embedded within specialized discourse communities whose members value particular ways of acting, talking, writing, and doing (Gee, 1989). Unfortunately, the fact that specialized ways of knowing are critical to engaging fully in a discipline does not mean that these ways are readily accessible to those who need to learn them. As Russell (1992) notes,

> The discursive practices of each academic field are so embedded in the texture of its disciplinary activity that they have not, until very recently, become an object of study or teaching within the disciplines. The American Historical Association, for example, has rarely devoted its attention to the question of how students learn to write (or write to learn) history. (p. 24)

More often, "the process of bringing students into the circle of disciplinary understandings" (Ball, Dice, & Bartholomae, 1990, p. 339) proceeds through enculturation, apprenticeship, and scaffolded participation (Flower, 1994; Gee, 1989; Geisler, 1994; Lave & Wenger, 1991; Young, 1996). Still, students realize that learning a discipline involves learning to write like one of its members and make robust (sometimes unsuccessful) efforts to uncover, invent, appropriate, or mimic disciplinary discourse practices to sound scholarly and authoritative (Ball et al., 1990; Bartholomae, 1985; Herrington & Moran, 1992; Stockton, 1995; Walvoord & McCarthy, 1990).

One reason we may lack models for the systematic instruction of disciplinary writing is because of a schism in our traditions of writing pedagogy: Explicit instruction toward literacy has been associated with general school writing and the implicit emergence of expertise with skills of the professions (Geisler, 1994). Geisler proposes an integrated framework of academic literacy for considering issues of disciplinary reading and writing. Academic literacy in a particular domain or discipline involves two dimensions of knowledge: knowledge of the content of a domain and knowledge of its rhetorical processes. For each dimension, or problem space,[4] there is a continuum of naive to expert representations or understandings. In terms of content, the novice tends to see everyday entities and decontextualized bits of knowledge, but the expert sees abstract entities contextualized through the integrative structure, logic, and principles of a domain. In terms of rhetorical process, novices operate with "an everyday understanding of texts as autonomous repositories of knowledge" (Geisler, 1994, p. 87), whereas experts read and write in ways that manipulate textual objects at a more abstract level to enact valued disciplinary acts of explanation or argument. One can use the academic literacy framework to discuss not only an individual's knowledge but also a text, a writing task, or an episode of instruction in terms of the sophistication with which it represents the content and rhetoric of its discipline.

Geisler's (1994) two-dimensional framework is consistent with other more general discussions of the contrast between novice and expert writing. Flower (1979) contrasts naive writer-based prose, which is somewhat monologic and presents information as it might be organized in the writer's memory, with more rhetorically savvy reader-based prose that presents information in ways that anticipate the needs or interests of the reader. Bereiter and Scardamalia (1987; Scardamalia & Bereiter, 1987) distinguish between more naive knowledge telling, in which the writer essentially lists what she or he knows about a topic through a semistructured memory dump; and more sophisticated knowledge transformation, in which the writer generates, analyzes, and restructures what she or he knows about a topic into a coherently integrated argument, explanation, or description. Consider, then, how the writing of a naive history student and an expert historian might differ as viewed from these perspectives. A history student who is a novice on both dimensions may see historical knowledge as random bits or factoids to be reproduced and summarized and write using a school form such as a five-paragraph theme or essay[5] to tell what she or he knows about the topic. In contrast, a practicing historian who is expert in both dimensions would see historical knowledge as constructed through the interpretation of evidence from authored sources and use the rhetorical strategies of the disciplinary genre to transform disparate pieces of information into a coherent argument.

If expertise in a discipline requires knowledge of its content and rhetoric, then to understand how and what a student learns (or does not learn) about and through a disciplinary reading/writing activity, we need to understand how that activity and the context in which it is enacted represent both dimensions. This is particularly critical to our study because our five students were neither learning to be historians, nor were they learning as novice apprentices from practicing historians. Rather, they were students learning from a particular history teacher in a particular class that itself functioned as a discourse community. We need to see what of history was available to them there and how historical content and rhetoric were represented in that community and in its writing tasks. We then need to understand how these students responded and to what extent their writing revealed monologic knowledge telling or disciplinary knowledge transformation.

To apply the notion of historical literacy at a detailed level, we examined students' document-based writing as acts of discourse synthesis (Spivey, 1990; Spivey & King, 1989), the process by which readers/writers transform source texts to compose new texts by actively selecting information (based on a relevance principle), organizing information (at local and global levels), and connecting information (within and between texts and prior knowledge). It is the accumulation of the many specific decisions and actions individual writers make while producing text that establishes the patterns of citation, evaluation, proof, and/or explanatory coherence characterizing how well their writing conforms to disciplinary criteria. It is the ongoing

enactment of these patterns across many writers that establishes the dynamic traditions comprising the discourse, genre, and intertext of a discipline.

However, when individuals actually make on-line writing decisions, they are not guided by some algorithmic pattern of disciplinary criteria that, once learned, they apply. Rather, as writers negotiate a path through source texts to compose their own text, they are guided by the constraints and goals embedded in their own task representation or sense of what and how they are to write (Flower, 1990, 1994; Flower et al., 1990). We can conservatively estimate a writer's task representation by examining the particular features (disciplinary or otherwise) present in her or his text because, although a writer may know or intend more than she or he manages to write, the writer cannot write what she or he does not know (at some level). Thus, by closely examining how our five student writers selected, organized, and connected information in their texts, we can begin to estimate how they understood and undertook the task of historical writing.[6]

The remainder of our article presents the results of our analyses. First, we examine how history was represented and enacted in the context of Sterling's class, referring to disciplinary practice and discourse for comparison. Second, we examine the Advanced Placement Document-Based Question task as constructed and as presented by Sterling (in both spoken and written comments) to determine its potential to reveal history and engage students in acts of historical reasoning and writing. Third, we analyze the student texts to determine the degree to which the writers were able to transform and integrate information in ways appropriate to the discipline of history. Specifically, we look at global organizational patterns, local linguistic connects, document use, and citation language to analyze the depth of interpretation and integration. We conclude by discussing patterns of student writing development and exploring their implications for the instruction of academic literacy in the domain of history.

ANALYZING THE CONTEXT: ACADEMIC LITERACY IN HISTORY AND IN STERLING'S CLASS

We frame our analyses of the context of instruction by considering what it might mean to develop academic literacy in history. In their words and practice, expert historians and expert history teachers reveal that history is an interpretive, constructive, analytic, and dia-

logic process—a discipline concerned with both knowledge of the past and the acts of constructing that knowledge (Bailyn, 1994; Leinhardt, Stainton, & Virji, 1994; Wineburg & Wilson, 1991). Leinhardt (1993a, 1993b) identifies four core areas of historical content: events (relatively delimited episodes such as wars and biographies), structures (large systems or institutions such as governments), themes (interpretive patterns present across events or structures such as tensions between power and freedom), and metasystems (disciplinary methods of inquiry, interpretation, and argument such as synthesis and perspective taking).[7] To reason and write in history, then, our students needed to critically analyze and interpret events, institutions, structures, and recurring themes within and across periods using metasystems of inquiry and argument. They needed to move from mindless memorization of facts to mindful manipulation of information, from "knowing about" to "reasoning with" historical content (Leinhardt, 1994; Leinhardt, Stainton, Virji, & Odoroff, 1994).

Historical reasoning and problem solving often center on texts. The discipline is carried in a wide array of text types and textual artifacts, and its practice rests on the location, analysis, evaluation, and production of texts. Skilled reading in history involves critical analysis and interpretation across multiple texts to construct an explanation, argument, or narrative (Britt, Rouet, Georgi, & Perfetti, 1994; Leinhardt & Young, 1996; Perfetti, Britt, & Georgi, 1995; Perfetti, Britt, Rouet, Georgi, & Mason, 1994; Schama, 1991; Wineburg, 1991a, 1991b, 1994).[8] Skilled writing in history involves the written development of historical cases and is often marked by creative enabling tensions such as those between interpretation and documentation or between temporal scope and multiple factors (Cook, 1988). Unfortunately, few high school history assignments use multiple primary texts and/or explore creative tensions. Tasks such as the Document-Based Question that require writers to combine and transform information from multiple texts (other than textbook prose) are promising because they offer fairly sophisticated representations of the content and rhetoric of a discipline (Geisler, 1994). Still, the issues involved in nurturing historical writing are many: Writers' background knowledge structure affects their approach to argument (Langer, 1984), their sense of task and audience shapes their use of sources and appeals to authority (Greene, 1993, 1994; Holt, 1990), and writers may see a disciplinary genre as either conflicting with familiar school genre (Walvoord & Breihan, 1990) or simply as discrete and formulaic (Stockton, 1995).

To what extent did the reasoning, reading, and writing activities in Sterling's class reveal a rich sense of history and promote academic literacy in the discipline? Our analyses suggest that her students entered a discourse community that explored rich conceptions of the stuff of history. Sterling's class challenged simple notions of historical content as known facts about events and historical texts as truthful objective accounts. Instead, it suggested a more disciplinary sense of historians as those who interpret evidence with a theoretical purpose and historical knowledge as interpreted rather than absolute. Sterling's first reading assignment and first week of discussion set the tone: The group examined various definitions of history, distinguished between the "factness" of events and their later use by writers, and came to see history as constructed by historians through the interpretation of evidence using the methods of analysis, synthesis, and periodicity. As an Advanced Placement class, Sterling's course was designed to offer a transition from a high school to a college approach to thinking and learning, from naive to more advanced representations of a discipline. Practically, this richness prepared students to take the Advanced Placement examination, used by many universities to determine credit and/or placement. Students who do well on the 3-hour history exam (comprising a multiple-choice knowledge section, an assigned document-based essay, and a free choice no-document essay) can often pass from introductory to advanced college courses, saving time and tuition. Sterling's course was intended to develop the deep knowledge and mindful reasoning and writing needed to do well on the exam.[9]

The five students we studied—Ted, Marilyn, Karl, Penny, and Beth—entered into a course known for doing "hard" history but also into one led by a teacher with a reputation for coaching students to succeed. Sterling was selected for study based on evidence from multiple converging indexes of her expertise, including a record of continuing high exam performance over the years by her students, considerable experience as a test reader, and numerous outstanding referrals by faculty, parents, alumni, and students. In the classes we observed, Sterling modeled ways of knowing valued within the discipline of history and in Advanced Placement standards.[10] As she constructed explanations and arguments concerning critical historical issues, Sterling reasoned from multiple texts, differentiated between factors, elaborated relevant details, qualified sources, and integrated information. She pressed her students to do the same, coaching and prompting them at first, and eventually withdrawing this scaffolding as they grew increasingly able to mindfully use evidence in constructing arguments and explanations.

Sterling's course challenged students with deep and broad reading of historical sources, frequent practice in interpreting documents, and varied forms of writing. She stated in her syllabus and modeled in her class that "history is really a way of reading and writing about events in the past. All history is interpretation." She asked her students to read to detect and evaluate authors' interpretations and to write to present and support their own interpretations. Her students used two major comprehensive American history textbooks, reading them with and against each other, while also reading excerpts from the works of economic, political, intellectual, and social historians, as well as news articles, primary documents, and court cases. Furthermore, almost all of Sterling's writing assignments demanded that students evaluate multiple sources, whether in brief position papers or extended independent works of research or critique. To specifically prepare students for the Advanced Placement Document-Based Question, she assigned four timed document-based essays (from her bank of retired exams) over the course of the year.

ANALYZING THE TASK: THE DOCUMENT-BASED QUESTION AS CONSTRUCTED AND AS PRESENTED BY STERLING

Each Document-Based Question comprises a general set of directions, a specific statement of topic and task, and a set of documents. The general directions (as stated for Question 1) opened our article. The task statements and a list of documents for each of the four questions are given in Table 1.

What is the nature of the documents used in the task? There are no textbook references or interpretive historical accounts. There are only primary documents that rarely refer to the same event as might multiple eyewitness accounts or testimonies. Rather, each set of 8 to 11 documents is a scattered collection of oblique moments from social, political, economic, or intellectual sectors of life during the critical period—moments captured in various forms, including statistical displays, artwork, political commentaries, literary works, songs, congressional records, and maps. To wring meaning from the documents,

Table 1
Questions and Document Types

	Date	Number and Type of Documents	Question Statement
Entry task	9-30	None	Evaluate this statement: Direct involvement by the English government in colonial affairs between 1763-1776 led to the American Revolution.
Question 1: Articles of Confederation	10-12	8 documents: 3 letters, graph, map, diplomat's instructions, speech, report	"From 1781 to 1789, the Articles of Confederation provided the United States with an effective government." Using the documents and your knowledge of the period, evaluate this statement.
Question 2: John Brown	11-21	8 documents: 2 editorials, book excerpt, review of biography, letter, campaign speech, song, painting	John Brown's raid on the federal armory at Harper's Ferry, Virginia, in October 1859 involved only a handful of abolitionists, freed no slaves, and was over in 2 days. Although many Northerners condemned the raid, by 1863 John Brown had become a hero and a martyr in the North. To what extent and in what ways do the views about John Brown expressed in the documents illustrate the changing North-South relations between 1859 and 1863?
Question 3: Farmers' problems	1-31	8 documents: party platform, speech, editorial cartoon, column, book excerpt, testimony, short story excerpt, chart	Documents A-H reveal some of the problems that many farmers in the late 19th century (1880-1900) saw as threats to their way of life. Using the documents and your knowledge of the period, (a) explain the reasons for agrarian discontent and (b) evaluate the validity of the farmers' complaints.
Question 4: Immigration Act	3-14	11 documents: report, census graph, letter, journal excerpt, chart, speech, 2 editorials, 2 lists, editorial cartoon	Relying on a critical evaluation of the accompanying documents, analyze the factors that probably influenced Congress to pass the Immigration Act of 1924.

students must bring meaning to them, using content knowledge to read and interpret these sources. The task requires that students use and demonstrate knowledge not just of a particular event but rather of an entire period, with the tensions, issues, structures, and events that shaped it. They need to use their sense of chronology and geography to situate the specifics of the documents inside a description of what else preceded, coincided, and followed the situations the authors refer to and need to analyze source or bias. Students cannot simply "tell" what happened in the period or what the documents literally "say." Rather, they need to transform their knowledge and the documents to explain, evaluate, analyze, and argue aspects of a critical historical topic. This means developing a thesis and selecting, organizing, and connecting relevant ideas to create a coherent text that makes claims and cites supporting evidence.

As constructed, the Document-Based Question task requires manipulation of multiple sources toward synthesis rather than summary and has the potential to reveal aspects of the discipline by prompting historical reasoning involving the analysis of original sources to construct an evidenced interpretation of a critical issue.[11] How was the task actually presented in Sterling's class? We examined all lesson transcripts and written materials to locate references to the Document-Based Question. Many spoken comments were made before assigning Question 1, others when assigning or returning the other three essays. In spoken comments made in instruction and discussion, Sterling emphasized four key principles that are interrelated and overlap. She stressed it is critical to

1. answer the question that is posed,
2. draw on period knowledge to establish a frame of reference,
3. interpret—don't paraphrase—the documents, and
4. provide and carry out a coherent plan of argument in the essay.

In isolation, reduced to quoted platitudes, these may seem to be fairly typical guidelines for succeeding at what is, at one level, a school-based writing task used for assessment. However, there was a fifth principle or theme that wound through and energized all of Sterling's discussions about document-based writing. Sterling repeatedly stressed the importance and burden of authorship: "You are the author. It's your essay. You're the one who is going to bring the themes in . . . follow certain directions, certain patterns. You are the author. I cannot emphasize that enough." Being an author for this task in this

discourse community meant determining what the question asked the writer to do; selecting, organizing, and connecting knowledge of the period; evaluating and interpreting the documents; constructing an argument with claims, examples, evidence, and explanations; and developing that argument in writing that clearly establishes its own rhetorical plan or standard and maintains coherence. These ever-present issues and detailed enactments of authorship transformed and problematized the other four principles, so that students experienced them not as items to check off in sequence but rather as goals and constraints to negotiate, arbitrate, and juggle.

The comments Sterling wrote on returned essays referred to how well the student had (a) answered the question (concerned topic statement and paragraph, plan, conclusion) 22%, (b) drawn on the context of the period (concerned dates, period, frame of reference, historical factors) 15%, (c) interpreted the documents (concerned document use and citation language) 26%, (d) presented a coherent argument (concerned elaboration, examples, evidence, proof) 21%, and (e) been mechanically correct (concerned grammar, format, spelling) 16%. The percentage of total comments assigned to each category and listed above reveals that the majority of written comments were, aptly, about the interpretation and integration of information from primary documents, the least familiar aspect of the task for students. Thus, Sterling's oral coaching and written evaluations of the Document-Based Question task were congruent and explicit, not random and mystical. Furthermore, both stressed that to construct a sound argument, authors needed to transform, interpret, and integrate rather than list knowledge.[12]

The Writing Samples

Student response data included five writing samples for each of the five students: one open-ended, no-document essay in early September[13] and four document-based question essays (from October, November, January, and March). Because the exam was in May, the four practice essays, assigned after study of the relevant period and written at home, represented a full year of preparation. To simulate testing conditions, Sterling asked students to restrict activity to one uninterrupted block of time approximating exam time. To encourage self-monitoring, she asked them to record and report both time spent studying the documents and time spent writing. Crossed-out text, margin corrections, and often messy conclusions suggest students did as she asked.

ANALYZING THE WRITING: THE LOCAL ENACTMENTS OF AUTHORSHIP

Ultimately, it is the degree to which students are able to transform their knowledge and documents as evidence for an argument or explanation that determines whether the enactments and decisions of authorship produce text that is more or less academically literate. This ability relies on and indicates the depth, flexibility, and fluency of writers' historical knowledge and the richness of their rhetorical repertoire. To organize their texts, writers need macrostructures or patterns with which to lay out an argument as well as linguistic markers and moves with which to sew ideas together, adjoin words and phrases, turn rhetorical corners, and reinforce critical points as they produce text that enacts the pattern. To use documents, writers need to see documents in historical ways, interpret and integrate content from various sources and forms into their global argument, and skillfully use the language of citation to weave this content into their local text. Therefore, to trace the growth of historical literacy in students' document-based writing, we analyzed in detail two major aspects of writing: organization and document use.

Organizational Pattern and Connects

To see how students arranged ideas at the macrolevel, how they connected ideas at the microlevel, and how the two levels interrelated, we parsed each text into connects and idea units. Connects are content-free words or phrases that relate one idea unit to another. Idea units are distinct bits of historical or document-based content knowledge. For each essay, we constructed a schematic web in which idea units were represented by nodes and stated or implied connects by lines linking nodes. We examined the text together with the schematic web to determine the organizational pattern that captured the majority of idea units and connects relating them. We discuss the organizational patterns and categories of connects we identified and then demonstrate their interrelatedness in prototypical textual excerpts.

Organizational Pattern

We identified three global organization patterns that described the macrostructure of the students' texts and the majority of logical relations between ideas: list, specified list, and causal.[14] Given the same set of instructions, the various patterns with which students wrote served as one indicator of what they knew to do in terms of content and rhetoric.

List pattern. Idea units were presented as a somewhat random series of concepts, ideas, or facts. List essays appeared to have no deep conceptual principle underlying selection or arrangement of ideas. Sentences beginning, "There were several reasons that . . ." or "The farmers had many problems such as . . ." provided essays with an introduction but no rhetorical structure. Without this plan, list essays could get lost in iterative branches off one item such as, "Group G had several problems. These were X, Y, Z. Problem X took several forms. These were 1, 2, 3. Several examples of 1 were A, B, C." Sometimes after paragraphs of embedded lists, an essay would end abruptly without returning to explicate all items of the highest order list. The list structure did seem to provide basic organization for writers' ideas, but when lacking a principled conceptual or historical plan, some list essays never became arguments.

Specified list pattern. As in a list, idea units were presented as a collection of concepts, patterns, or facts without ongoing causal chains or links. However, although list essays were somewhat random, specified-list essays clustered ideas around concepts or categories privileged in history such as factors, time, or place. The most common type organized ideas by factors such as social, economic, political, and religious. (Sterling had emphasized these.) Lists specified by time organized idea units using chronology (before or after a date or event) but without establishing causality. Lists specified by place gave conditions in one location, then in another. By providing a sort of template of topics (i.e., factors) for searching memory, interpreting documents, and producing text, the specified-list pattern could help writers manage critical issues of distribution (balancing discussion of economic and social issues related to immigration) and location or perspective (describing how an institution functioned in the North and South). One problematic type of specified list seemed to organize paragraphs around "what Document A (or B or C) says." This strategy may have been efficient (to produce text, just get next document), but it rarely

produced coherent essays using documentary evidence to argue a thesis.

Causal pattern. Idea units essentially were organized as a narrative and presented as a chain of cause-consequences with each event leading to the next.[15] Causal essays were full of actors and agents (persons, institutions, countries) with motivations and reactions. There was a sense of the historical milieu and of unfolding plot across the entire essay. Just as writers of list essays sometimes got lost in iterative branchings and never returned to the thesis, writers of causal essays sometimes got lost in a local chain of causal pearls, with no way to differentiate one "and then" bead from the next, mark how far they had come, or ensure they got to the end of the chain. Although causal essays may reflect the historical sweep of narrative, students who used this pattern still needed to clearly argue a thesis—their story needed to make a point.

Connects

We found six major categories of connects with which writers linked and related ideas at the local level: list constructor, exemplar, equivalence, place holder, causal, and qualifier.

List constructor connects. List constructor connects set up and managed lists of idea units. Examples included *first, secondly, one of several, among the many,* and *finally.* Use of list constructor connects was widespread and usually smooth rather than clumsy. It seems that the "first, second, third" writing strategy was well (if not over) rehearsed for these students. This is not a condemnation of the list pattern, but for some students it functioned as a mechanical way to indicate a list of ideas without substantively qualifying the items.

Exemplar connects. Exemplar connects presented one idea as an instance of another. Examples included *one example of, as illustrated by, which could be seen in, for instance,* and *such as.* A less orthodox exemplar connect stated that *A was another surfacing of B.* To skillfully present chunks of background knowledge or cite documents as evidence for a claim, a writer needed familiarity and fluency with exemplar links and transitions.

Equivalence connects. Equivalence connects linked ideas by referring to their equivalence or lack thereof. Students used them to clarify the true nature of things or reveal when things that seemed equal were

not. Examples included *which in reality was, which was actually, as, which seemed like,* and *this was just like.* Although students sometimes lacked finesse in establishing or denying equivalence of concepts, the attempt to do so suggested they had begun to see that history involves looking behind and under events, structures, and issues.

Place holder connects. Place holder connects referred to sets of ideas that were never articulated in text. Examples included *many factors, lots of reasons, other such things,* and *many issues.* Often, the presence of a place holder seemed to indicate that a writer was familiar with appropriate historical classes of content but lacked the time or the detailed knowledge with which to flesh out the template. Occasionally, a text seemed full of senseless place holder ghosts indicating no such historical awareness.

Causal connects. Causal connects presented one idea as resulting from another, linking cause and effect. Students used a variety of language to make causal links, including standard terms—such as *led to, resulted in, which caused, so that,* and *through*—and less orthodox phrases, such as one event *sparked, inspired,* or *blossomed into another.* When trying to document causal attribution in text, we had to be sensitive to issues regarding implied versus stated causality.

Qualifier connects. Qualifier connects served to modify or evaluate, suggesting one idea juxtaposed, countered, or delimited another. Examples included *however, although, even though,* and *while X— still Y—.* Their presence signaled a certain writerly sophistication that involved examining and evaluating (rather than merely reporting) information or evidence. Historical literacy involves seeing historical knowledge as interpreted rather than absolute and knowing how to qualify evidence and arguments in writing. The rarity of qualifier connects suggests that this rhetorical purpose and/or strategies to achieve it were just beginning for some students but still completely lacking for others.

Patterns and Connects: Examples in Text

Connects indicate and carry out organization, revealing where and how writers link ideas and what actual language they use to do so. To demonstrate this, we will discuss excerpts from three essays that exemplify the list, specified list, and causal pattern, respectively. The excerpts have been edited to highlight connects and patterns.

In the list example, Ted is writing about the Articles of Confederation for Question 1:

> The main problem that the United States was facing was its failure to make economic conditions improve. . . . This downward economic trend was based on several things. The first and one of the biggest problems that the Congress had which contributed directly to the problem was its failure to collect taxes. . . . Another problem was that between 1771 and 1789 the estimated market value of United States exports to Great Britain dropped 1,077 (in thousands). . . .
>
> Another problem which was the basic problem surrounding all of these events was that the government was not trusted and was not given enough power to lead the country. This lack of power took several forms. One form was that. . . . One of the powers that the national government did not have was the power to collect taxes. This had several results. . . .

Ted uses mostly list constructor connects (*several things, the first, another*) and exemplar connects (*another example, one of these things*) to enumerate "the problems with the confederation." These problems are neither specified nor woven into a causal narrative. Ted's paragraphs (the order of which seems somewhat arbitrary) begin by naming "another problem" then branching off (usually in sets of three) to show how that problem "took several forms" and how one of these forms "had several results." Although he refers to results, they are not woven in or narrated but rather listed as the last twigs in a series of branched lists.

In the specified list example, Penny is writing about immigration for Question 4:

> The many reasons for the agrarian discontent in the late 19th century were partially social grievances but for the most part were financial problems. The many social problems included the loneliness and isolation of the widely spaced farms, the onslaught of natural hazards, such as droughts, blizzards, and grasshoppers, and in some places raids by Indians. Even more lamented, was the financial state which drove many farmers to ruin or to city life. Many reasons behind this state were high mortgage rates, low prices on the world market due to overabundance of grains, an unprotected market, heavy taxing, being cheated by the railroads, and President McKinley's support of gold. . . . In addition, the Agrarian Party, the Populists, blamed this financial situation on the fact that. . . . Another main cause of agrarian dissatisfaction was the

> unfair pricing and rebating done by the railroads. Such as. . . . The main reasons for dissent among the farmers included. . . .

Penny uses list constructor connects (*the many reasons, in addition, another*) and exemplar connects (*such as*) but, unlike Ted, she specifies her list with historical factors. Penny refers to problems related to loneliness, isolation, and the psychological trauma of battling natural disasters as distinct from problems related to high mortgage rates, unprotected markets, and heavy taxes. She fills in her factor framework (social, financial) with content drawn from her knowledge and from the documents. She even indicates the relative importance of the two types of complaints using qualifier connects (*were partially, but for the most part*).

In the causal example, Karl is also writing about immigration for Question 4:

> In 1924, America was in a period of economic growth. This caused a confident feeling in many Americans. They were prospering, and they did not want a change. . . . Americans did not want a change in their lifestyles, and many saw immigrants as a threat to the preservation of the American way of life.
>
> Because of the prosperity America was enjoying, the attitude at the time was very conceited. The feelings that a "superior" race was developing in America were growing stronger than ever. Americans, as superiors, did not want the responsibility to have to be the caretakers of these inferior immigrants. . . . Americans wanted to preserve the splendid stock, of which immigrants were not a part.

What one notices immediately is the absence of list constructor and exemplar connects. Rather than beginning with a topic ("The main problem," "the many reasons"), Karl begins with a time ("In 1924"). He sets a scene (America was in a period of economic growth), then spins a narrative. His connects are mostly causal by function if not by form (*because, therefore, this would*). His tale is marked by active agents (Americans *prosper, enjoy, worry, voice*), verb phrases that unfold the past before us (*were prospering, were growing stronger than ever*), and paragraphs that mount conflict on conflict (Americans enjoy growth and don't want change). Karl presses on, building to the conclusion of his causal chain: "The American people were now voicing their opinions, applying pressures to the American lawmakers to do something about the increasing amounts of immigrants, so they did, with the Immigration Act of 1924." Karl's writing may lack the force, authority, and voice of a historian's crafted and evidenced narrative, but he organizes information into a causal flow of events and emplots his argument.

Distribution, Issues, and Interpretation

Of the three organizational patterns, students used some form of list most often. The list pattern accounted for 13 of the 20 texts and the specified list pattern for 4 more. Only 3 texts had a causal macropattern. There was a similar distribution in the entry essays, where 2 were list, 2 specified list, and 1 causal. Furthermore, there was evidence that across their entry and document-based texts, students tended to use the same pattern: Those who entered Sterling's class constructing list essays continued to do so, and those who used factors to specify their list continued to do so. Faced with the new task of writing from documents, these writers (like many before them) seemed to reach for robust, well-rehearsed ways of writing (Flower et al., 1990; Greene, 1994). Sometimes students successfully modified familiar schemas, as when they learned to "hang" their list framework with document and period content using Sterling's factors. Other times, students seemed to force historical content into a frame it did not fit—as when one writer who tended to use a rule of three (three examples, three factors) claimed there were precisely three types of people who supported John Brown and three types who opposed him, a somewhat suspect symmetry in usually messy historical data.

Evidence of conflict between familiar and emergent writing schemas could be found in Karl's writing. His entry essay was a detailed narrative, two document-based texts were causal, and two others were micronarratives embedded in a list macrostructure. For example, in his first document-based text, he used the language of argument to introduce his claims: "From 1781 to 1789, the Articles of Confederation did not provide an adequate government to run the United States of America. The Articles of Confederation gave no centralized power; too much power was given to the states." Then his second paragraph used narrative language to set a scene, fill it with actors and agents, and start his cause-consequence chain unfolding: "After defeating Great Britain to gain independence, the people of the United States did not want a tyrant. They had just fought to rid

themselves of just that. They believed creating a strong national government might prove to be a grave error." He seemed to adapt his narrative by "bookending" it with claims and interspersing it with bits of lists. Although hard to capture in brief excerpts, language shifts and second starts suggest that it was not a trivial task for him to adapt, blend, or trade old and new patterns.

Regardless of the pattern, students had to select, organize, and connect ideas. They had to manage the points of a global argument and weave local language to present textual evidence from their knowledge and the documents. Students could use a list structure to produce an unevaluated dump of random ideas or a well-interpreted argument. They could specify their lists of ideas by writing about what each document says or about a considered set of historical factors. They could write a causal essay lost in a chain of "and then X, which led to Y" or use the sweep and structure of narrative to illustrate an argument. Sterling herself did not privilege any organizational pattern but rather stressed that students, as authors, needed to develop and follow a plan for articulating a coherent argument integrating background and document information.

Document Use

The Document-Based Question is interesting precisely because students must use a diverse set of primary historical documents to construct a coherent argument or explanation. We analyzed the following specific, interconnected aspects of document use: how many different documents students used, how many citations per document they made, how they conceptualized documents, how they cited documents, which documents they used, and what factors affected document use. These are informative analyses because taken both singly and together, they give us very particular ways of tracing abstract notions such as the extent to which a writer transforms and integrates information and the extent to which she or he understands about the nature of historical knowledge and sources. For example, a writer who cites six documents likely synthesizes more varied information than one who cites two. Similarly, a writer who qualifies a source more likely understands issues of bias than one who refers only to what "Document A said."

Defining a Citation

In our analyses, we used a conservative definition of citation as an explicit, uninterrupted reference to one document. Explicit citations were indicated when the student referred directly to document label ("Document A says"), document author ("as Senator Ellison stated"), or document source ("as stated in the Congressional Record"), or made verbatim quotations with or without quotation marks. This last type was marked by a sudden shift to language unlike the student's own, which then had to be matched to identical language in a source document to be counted as a citation. We did not count implicit references to document content made in the student's own language because these bits of content might have been from the student's own knowledge.

We sought evidence of how much students were manipulating document content: whether they were merely reading one idea off one document and then moving on or whether they were reading across and between documents, parsing each into several points and integrating these throughout their argument. Therefore, we focused on the number of distinct citations rather than the size of an uninterrupted citation. If a student developed similar ideas from Document A in one textual chunk without referring to another document or outside knowledge, it was counted as a single citation for Document A. However, if a student cited Document A, then moved on to another document or to add outside information and then later cited a different point from Document A, it was counted as a second citation. Thus, for each essay, we determined how many times each document was cited and how many total citations were made from how many documents. The number of total citations could exceed the number of documents. For example, in answering Question 2, Penny cited four of the eight documents for a total of four citations, whereas Ted cited five of the eight, two of them twice, for a total of seven citations. Such variables begin to get at the depth, range, and integration of information used.

Number of Documents Used Per Question

How many of the available documents did students use? The number of documents cited for one question ranged from 1 of 11 by

Karl to 10 of 11 by Ted. Sterling (and exam guidelines) neither expected nor encouraged students to use all the documents but rather emphasized that a comprehensive answer took into account multiple perspectives and issues, and to the extent which documents represented this range, using more was better. A strategically chosen sample of at least half the documents was recommended. Students were able to manage this: On average, they used just more than half (53%) of the documents available on any one essay.

Number of Citations Made Per Document and Per Question

The number of citations per document and question indicated whether students were able to "harvest" and reorganize information to support their argument. The number of citations per question ranged from Karl's 1 citation from 1 of the 11 documents on Question 4 to Ted's 17 citations of the same set. On average, students used 4.6 documents to make 5.2 citations when there were 8 documents available and used 4.8 documents to make 7 citations when there were 11 documents. In 8 of the 20 essays, students cited at least one document more than once. By the fourth question toward the end of the year, most students were producing fairly integrative writing: Penny cited 3 documents once and another 3 twice each, and Ted cited 4 documents once, 5 documents twice, and 1 document 3 times. All five students moved beyond the most novice "one document, one point, one sentence" strategy Sterling warned against. Still, sophisticated patterns of multiple citation were not the norm because, as we discuss later, it is not at all simple to read and argue between and across documents.[16]

Document Interpretation

Historical literacy involves seeing documents and the act of document-based writing in disciplinary ways. Students need to see documents as artifacts and products shaped by the forces of a period; as texts with authors, biases, and purposes; and as members of a set of like genres (map, letter) or like topics (abolition, unionism) best understood through comparison and contextualization. They need to see their task as writing from the documents rather than writing about them. Writing from documents treats document content as biased and in

need of interpretation and presents interpreted content from within an argument. Writing about documents treats document content as if it is "true" and needs only to be catalogued. There was evidence in the earlier texts that some students did not start out viewing or presenting documents in disciplinary ways.

One naive notion about the nature of primary documents treated individual documents as authorless and diverse documents as homogeneous sets. For example, consider this sentence that introduced a Question 2 essay: "Although the articles make different points they all agree, they all think that slavery is wrong and should be abolished." And consider this one in its conclusion: "The main point of the documents was that people are beginning to sit up and take notice." This student used "the articles" to refer to a set of varied artifacts, including an editorial, letter, song, and painting; he discussed how the "articles" all "agree" and "think" without reference to authors; and he summarized them as having a "main point" instead of differentiating between their perspectives.

A particularly interesting misconception suggested in one student's early text involved the subtle but critical distinction between thinking of documents as commissioned to express perspectives rather than as evidence of existing perspectives. For example: "At the time of John Brown's raid at Harper's Ferry, VA. in 1859, the North-South relations began to differ. Documents were written to express the views of these sides." This suggests that the country was united until the raid and that when "North-South relations began to differ," various authors were assigned the task of creating documents "to express the views of these sides"—as if Frederick Douglass had been asked to pen a letter to abolitionists, an unknown songwriter to write a martyr ditty, and Currier and Ives to add visual imagery with a lithograph of Brown kissing a slave baby.

At times, students portrayed documents as unproblematic and able to prove points: "Through the documents that are given, they provide the proof needed to explain and give reason to illustrate the North-South's changing relationship." This student did not seem to realize that, as author, she was to identify how the relationship changed and provide proof from the documents, that the documents themselves could not explain anything. The disciplinary sense of authoring an argument, of using the documents as artifact rather than object of discussion, is quite advanced. Sterling's students eventually did go beyond rather naive presentations and begin to interpret and use documents. Still, as the above examples suggest, developing disciplinary

conceptualizations about documents and task is neither automatic nor trivial for students, even those in an environment as rich as Sterling's class.

Citation Language

Just as connects enflesh organizational patterns, citation language enacts interpretation. The range of citation language indicates a range of historical understanding, of mechanical linguistic skill, and of repertoire of textual conventions. The most empty references lacked any identification information, as in "One document says . . ." and were often followed by stilted, verbatim excerpts suggesting nonsensical text sampling. The next class of citations referred to the letter label in the question, as in "Document B illustrates the beginning of the changes. . . ." These two types of citation provided no contextualization or analysis of sources. Either these writers did not know that they should analyze document sources or did not know how to do so.

The most common form of citation language identified author and/or source and presented them as evidence but did no evaluation or contextualization. For example, "This inflation, in turn, as John Jay pointed out in a letter to George Washington, caused considerable fear or worry on the part of stockholders and property-owners and therefore, created dissension" and "According to Henry P. Fairchild, the immigrants that were coming over to find jobs were the ones that could not make money in Europe." Other author-marked citations referred to multiple documents as evidence of a common idea, suggesting students were integrating information across documents (and form); for example, "In the eyes of many of his followers such as Frederick Douglass, & as is shown in the civil war song . . ." and "Both Fairchild and the editorial on self-preservation discuss the standard of living for Americans." Although language ranged from awkward to smooth, the predominance of this class of citation language suggested that Sterling's students did come to see documents as authored and author information as relevant.

There were times when student citation language indicated some level of evaluation. Students evaluated the degree to which a document illustrated a point, as in, "this is most clearly stated in an editorial by Horace Greeley" and "as is subtly portrayed in the Currier and Ives lithograph." More sophisticated and unusual were citations that analyzed how an author had said something and why that was relevant. Consider this example: "The very manner in which Jay states his document with the words 'You will in a respectful but firm manner insist' etc. suggests that there really was nothing the United States could have done if the British had happened to resist such demands." Here we have a student who sees documents as artifacts of periods, as authored, and as examinable for evidence that lies between and behind the actual text.

Document-Use Schemas: Examples in Text

Development in document use requires learning to do multiple things: to identify and evaluate sources, integrate points from a range of documents, and interpret and manipulate information as an author with an argument. To portray what growth looked like, we contrast two patterns of document use: the more novice "get next document" schema and the more sophisticated "integrated interpretation" schema. At first, students were likely to write about documents, telling what one document said, and then writing about the next. As they became more skilled, writers began to write from documents, interpreting and integrating what the authors said as evidence for an argument.

The first excerpt is taken from Marilyn's response to Question 1. We have inserted parenthetical labels noting the cited document. Marilyn seems to reach for any document, tell or excerpt some bit of its content, and then "get next document":

> The states began increasing their own power, and more and more casual. One document says that every class of public crediters must know the inability of Congress to pay their demands (C). This explains that Congress had been unable to fulfill what was needed. In another document (F), the rapid settlement of that country as injurious to the states, and find it necessary to check it. John Jay, considered the settlement of the country and also said that one of the Articles should stipulate that the US would forebear to use the navigation of that river below the territories to the ocean. Another document (G), a letter from John Jay to George Washington, said people who are orderly . . . will be led by the insecurity of property.

Marilyn cites only three documents, and each only once. There is an abrupt clash between the clumsiness of her own language and the stilted document excerpts imported verbatim.[17] Sentences and paragraphs often began "Document A says" or "In another document," as

the act of producing text was driven by switching to the next document. Interestingly, the documents she uses appear in the order given, suggesting she was telling content rather than transforming it into an argument she ordered and arranged.

Contrast this with Ted's answer to the fourth question, in which he makes 17 citations from 10 of 11 documents. When one considers that this means analyzing 10 texts, discerning and arranging critical points into an argument, and integrating citations, claims, and evidence into his own text all in under an hour, this is an impressive accomplishment. Here is an excerpt of his integrated interpretation:

> The belief that the number of immigrants was directly related to the income one received was well founded. In 1921, Immigration was at a 6 year high (B) and income was at a low (D) for the period. In May of 1921, an Immigration Act was passed limiting the number of immigrants to 3% of the population of that group in America according to the Annual report from the Commissioner General of Immigration in 1924 (A). Over the next two years, immigration dropped (B) and income increased (D). According to the same report in 1924, immigration was lowered to 2 percent of the population of the nationality (A). According to the total immigration chart from 1820-1957, Immigration raised a little then plummeted in 1925 (B). Income was rising steadily through these years (D). These influxes of immigration and decreases in income was a cause for "pure breaded" (sic) (I) American concern.

Ted opens with a direct evaluative claim and then proceeds to use four documents for evidence. He weaves back and forth between an immigration act, an immigration graph, and an income chart, juggling in text their forms, dates, and sources. He quotes from a letter (which he later identifies) to reiterate his opening claim. His language is fluid and consistent. As author, he is in control of the documents and interprets their content as evidence to evaluate a claim. The pattern of citation suggests that Ted is transforming his knowledge and the documents in disciplinary ways: He integrates information into an argument marked by chronology, contextualization of sources, and evaluation of correlation and causation.

Factors Affecting Document Use

We have discussed patterns of document use in terms of number, language, and schemas for citation. We were also curious which documents students used and which ones they did not. In trying to understand factors influencing document use, it may be attractive to search for general principles, such as "Students tend to use documents that are textual, short, and by sources they know and trust." We found no evidence for oversimplified unidimensional principles. For example, it may seem that a graphic or pictorial document would be harder to use than a textual document because writers must engage in some information transformation before meaning portrayed visually can be presented as text. However, there were nonverbal documents used by most students (a lithograph of John Brown kissing a baby) and by none (an editorial cartoon about Bolshevism), as well as textual documents used by all (lyrics to the Brown song) and none (a speech by Lincoln). The transparency, vividness, and content of a document were as salient as its form. To interpret and use a document, students had to bring meaning to and wring meaning from the document. We would argue that whether and how a student used a document were influenced by the depth of knowledge the student brought to it and by the depth of interpretation and transformation—of content and of form—the document required. We found multiple factors that combined to influence their ability to do both.

Quotability. Students often cited relatively direct, colorful, textual documents—such as letters, editorials, and speeches—and did so in explicit quotations or verbatim phrases. These texts tended to be more vivid or transparent than others such as institutional reports or political platforms. Students seemed particularly drawn to colorful exaggerated language that exemplified a position. Every student quoted Civil War lyrics, including "John Brown's body lies a-mouldering in the grave, but his soul is marching on. . . . He's gone to be a soldier in the army of the Lord." These vivid lyrics appeared easy to weave into text as evidence that some considered Brown a martyred hero. Students also seemed drawn to "quotable" nuggets embedded in longer, less familiar prose texts. For example, in four citations of a 1924 congressional address by Senator Ellison, all students quoted the same extremist sentence: "I think we now have sufficient population in our country for us to shut the door and breed up a pure, unadulterated American citizenship."

Form and information density. The form and density of information in a document could become obstacles to use and interpretation. For example, to skillfully use a map in Question 1, which depicted Western lands ceded by the states from 1781 to 1802, students needed flexible map-reading knowledge (to use a key with patterns indicating not only which state ceded a territory but when), considerable period

knowledge (of pre- and post-Revolutionary land holdings and voting rights of landed and landless states), and the rhetorical wherewithal to articulate how Western expansion issues related to the Articles of Confederation. Only one student discussed the map: "Besides many of the problems, the map seems to show the western lands ceded by the states, during the time the Articles were written. A few states did not have western claims, but some did, such as Virginia and New York. These lands ceded just added the developing country." This text included the empty place holders (*many of the problems*) and meaningless text sampling (the verbatim underlined title of the map) that characterized the novice get-next-document writing described above.

When students had knowledge of a topic, they seemed able and likely to use all related documents regardless of form (and when they did not, they used none of them). For example, in Question 3 about the validity of farmer grievances, there were two documents (a party platform and a speech) related to whether the monetary standard should be gold or silver and two other documents (a testimonial and a short story excerpt) related to rates for through versus freight traffic on railroads. If students referred to an issue (monetary standards or railroad prices), they tended to cite both relevant documents even though genres differed. Similarly, when a known perspective was transparent and repeated across documents, students tended to use them all. For example, on Question 1, if students cited one, they cited all three frustrated letters written by John Jay, Secretary of Foreign Affairs under the Articles of Confederation. Knowledge and form interacted to affect document use.

Trustworthiness and transparency. One might think students would be more likely to use documents by authors they knew and trusted (Perfetti et al., 1995). However, it was not that simple. On Question 2, four of five students cited Frederick Douglass but not one cited Abraham Lincoln, even though students may have found both sources familiar, trustworthy, and relevant. Still, where Douglass was decrying slavery and praising Brown, Lincoln was criticizing Democrats for "bushwhacking," a political tactic to influence upcoming elections by deflecting recent losses. Students generally had more difficulty discussing political factors than social or economic ones. This lack of knowledge, combined with the doublespeak marking Lincoln's speech, may have placed this document by a familiar, trusted source beyond students' reach. Thus, document use seemed affected not only by who was talking (source), how they were talking (form, tone, transparency), but also what they were talking about (topic knowledge).

To choose and use documents skillfully, writers needed to be able to see relevant content and issues in terms of the range and the center. They needed to cite documents that represented multiple factors, regions, ideas, or constituencies and cite those that represented critical core issues, perspectives, ideas, or events.[18] Difficulties in interpreting certain documents (such as the map) or certain content (such as political bushwhacking) could prevent them from covering all relevant and critical issues. Students sometimes overrepresented one issue or perspective (discussing all of Jones's letters about foreign affairs issues) at the cost of underrepresenting another (never grappling with how the Western lands map revealed domestic problems). Finally, sometimes students failed to cite or to wring meaning from the one document that seemed critical or central to a complete answer (as was the voting record to a discussion of factors leading to the passage of the Immigration Act). These factors could combine to limit the scope of a student's essay.

Structuring Ideas in Text

We analyzed structural text features that, taken alone, may be fairly shallow and reveal little about historical interpretation. However, some aspects of structure did lead us to see aspects of interpretive development. We will discuss two patterns related to the number of sentences per paragraph: the one-sentence paragraph and the runaway paragraph. Although neither of these patterns appeared in the no-document entry essays from September, one-sentence opening and/or closing paragraphs were fairly common in the first document-based essays. Because the document-based questions asked for explanation and evaluation of a statement or situation, an introduction that repeated that statement or situation without articulating a thesis, support, or qualification did not do its job. Similarly, a one-sentence conclusion was unlikely to provide requisite integrative summation.

For example, in her second essay, Beth used a one-liner both as introduction—"This paper will illustrate the changing North-South relations between 1859 and 1863 with specific evidence cited from incidents and quoted opinions from Northern and Southern supporters at this time"—and as conclusion—"These issues illustrate the changing North-South relations between 1859 and 1863 after the

incident at Harper's Ferry in Va., consequently hardening their relations even further." These one-liners are vacuous rearrangements of the question itself ("Your paper should illustrate" becomes "this paper will illustrate") in which place holders (evidence, incidents, opinions, issues) take the place of actual content and articulated thesis. As the year progressed, students were fairly quick to produce introductory paragraphs of greater length and complexity. However, although there was some growth in the length and complexity of conclusions, truncated, one-sentence final paragraphs appeared all year and were likely in part an artifact of the timed essay conditions.

Runaway paragraphs were those with a disproportionately large number of sentences. Certainly, the number of sentences per paragraph did not account for sentence length, accuracy, or even style. Still, it is unlikely that Karl was making intentional stylistic choices when, on Essay 2, he produced consecutive paragraphs of 21, 6, and 2 sentences. Instead, runaway paragraphs often seemed to indicate moments when development along the two dimensions of academic literacy (content and rhetoric) was out of sync, when one was learning historical content faster than rhetorical devices to manage and present that content. Karl seemed to gain period knowledge rapidly at first, and his first two document-based essays both contained runaway paragraphs (of 21 and 19 sentences) in which he spun out a dense, detailed, smooth, chain of causes and consequences. As we discussed earlier, Karl began to bookend these narratives with claims in rather hybrid essays and eventually produced more balanced writing in which he integrated his period knowledge and documents into an argument. Ted, on the other hand, began with fairly balanced writing, but then his emerging ability to interpret documents seemed to outpace his ability to structure those interpretations in writing. Earlier, we used part of the 19-sentence second paragraph of Ted's final text to demonstrate an interpreted integration document-use schema. That paragraph was followed by a 25-sentence paragraph of rich document-based writing. Still, his ability to conclude had not caught up: His third essay concluded in a one-sentence paragraph and his fourth in two sentences. It was not simple to satisfy all the multiple constraints of this writing task.

One vivid example of growth lies in contrasting this one-sentence introductory paragraph from Penny's first essay—"For all pragmatic purposes, the Articles of Confederation did not prove to be effective because they provided the central government with little or no power to gain funds or enforce laws"—with that of her final essay given here:

> Several factors which probably influenced Congress to pass the Immigration Act of 1924 were, politically and socially, fear of a Bolshevik revolution and the influence, particularly among the "Southern Block" states, of the Ku Klux Klan & other such nativist organizations. Furthermore, economically, as well as socially, fear of cheap alien labor taking over American jobs, and the isolationist foreign policies of the time, influenced the Congress to pass the Act. The national fear of "Reds" & job-seeking aliens, combined with the prevalent nativism of the era, caused much of the Congress, particularly of the Southern states, to vote for the 1924 Immigration Act.

Penny's first one-sentence introduction states a clear claim, a reason, and two examples but does not elaborate on them. Her final introduction has "more" content and rhetoric, refers to and instantiates four factors, gives detailed content as support, and does so in more layered (if not always smooth) language. Structural aspects of her texts trace this growth—her first and second essays have one-line introductions and conclusions, her third essay offers one thicker introduction/body paragraph followed by a substantial conclusion, and her fourth follows the above introduction with a body and concluding paragraph offering rich and integrated interpretation.

DISCUSSION

In our discussion, we consider what development means when writing from historical documents, summarize patterns of development evidenced in student writing, and comment on factors contributing to student growth. We close by exploring how to further support the development of academic literacy in history as well as further ways we might study it.

Academic Literacy: Patterns of Development

Having presented a series of detailed results, let us return to our larger question: Did students develop in their ability to write from

primary documents over the course of the year? Developing academic literacy in history involves growth along two dimensions: the content and the rhetoric of history. Growth on the content dimension meant developing more detailed and integrated period knowledge and deeper sensitivity to the nature of historical artifacts such as documents. Growth on the rhetorical dimension entailed moving toward more disciplinary acts of argument and interpretation, evaluating and qualifying claims and evidence, and using rhetorical and linguistic conventions to support these acts of analysis and synthesis. We examined the Advanced Placement Document-Based Question because the task had the potential (and Sterling intended it) to involve students in a critical historical task—reasoning and writing from multiple primary documents. We could then ground discussions of historical literacy in the analysis of a specific writing task meant to prompt and assess it. We could also frame our question—"Did students learn to write better?"—with a disciplinary sense of what "better" might mean. The detailed task analysis allowed us to identify the multiple layers of this task, and the detailed text analyses allowed us to trace how students worked within and across these layers.

To summarize the patterns of development we saw within and across student writing, we developed a chart that contrasts prototypical features of the least and most developed document-based writing (see Table 2). The naive or novice approach to the task reflected forms and norms of general school literacy and was marked by knowledge telling in which students "show what they know," listing period and document knowledge as discrete bits of information. The more advanced approach reflected forms and norms of academic literacy in history and was marked by knowledge transformation in which students "argue as the author," interpreting and integrating period and document knowledge as evidence for their claims. The body of the chart reviews what development looked like for each of six critical aspects or layers of this task: organizational pattern, connects, location of period and document knowledge, citation language, and introduction and conclusion paragraphs. We do not suggest this contrast to represent two rigid developmental stages. Rather, we suggest that development in this complex task means growth within each layer and in the ability to coordinate these layers.

In terms of organization, most students continued to use a global list pattern, but increasingly their ideas and text became less random, more specified by the historical factors stressed by Sterling. They

Table 2
Patterns of Development in Writing From Historical Documents

	School Literacy in General	Academic Literacy in History
General approach to the task	Knowledge telling Displays knowledge for school-based assessment Lists information as discrete bits "Show what you know"	Knowledge transformation Interprets knowledge through historical reasoning Integrates information as evidence "You are the author"
Organizational pattern	List—lost in iterative series of examples, "one such . . ." Causal—lost in unparsed chain of "and then . . ." Uses known patterns, sometimes forcing data to fit "Three types of people who supported Brown, three didn't"	Specified list—time, place, factors Causal—woven with argument Adapts known pattern or changes pattern Weaves argument into narrative
Connects	List constructors (first, second, third) Place holders (many reasons, certain problems) Limited repertoire of rhetorical and linguistic conventions	Qualifiers (particularly, however) Causal (which resulted in, and therefore) Growing repertoire of rhetorical and linguistic conventions
Location of period and document knowledge	Distinct, distant, unwoven Paragraph tells about period or documents Documents reflect order as given	Integrated, woven throughout as evidence Paragraphs blend period and documents behind claims Documents in order as suits argument
Document use	Writing about the documents "Get next document" schema Contents told or listed One document, one idea	Writing from the documents Integrated interpretation schema Multiple documents as evidence for one claim Multiple points, one document
Citation language	"Document A says," "The articles will show" Lacks identification or analysis of source Uninterpreted verbatim passages	"It is John Jay's tone which suggests . . ." Contextualizes source and perspective Weaves quotes as evidence of claim or perspective
Introduction and conclusion paragraphs	Repeats topic or question statement One-sentence paragraphs Introduction: weak or missing claims, no plan for proof Conclusion: no integrated summary	Modifies or qualifies topic or question statement Longer, more complex paragraphs Introduction: clear thesis, claims, plan for proof given Conclusion: integrated summary

tended to adapt their "preferred" general pattern in historical ways—weaving local causal chains into their list structure or specified factors and argument bits into their causal structure. Students moved from presenting ideas in sequence using empty list constructors to linking them conceptually using causal and qualifier connects. As their content knowledge grew, there were fewer ghostlike place holders (e.g., "some problems") and more elaborated detail. Students grew in their knowledge of what documents are and how to use them: Citation language changed quickly ("Document A says" vanished by mid-year), type and source of document were more frequently noted, eventually all students could harvest multiple points from one document, and most used multiple documents to make one point. Across layers, there was a move toward qualification and evaluation, demonstrated by elaborated theses, factor-specified list patterns, source contextualization, and increased structural complexity.

Although there was evidence of growth, students did not make smooth and steady progress from bad to better. Students started with sound, above-average school literacy skills. When asked to argue from multiple primary sources, at first they lacked the needed academic literacy skills. At times—as when Karl's rich content knowledge or Ted's emergent ability to interpret led to runaway paragraphs followed by one-liner conclusions—it seemed that growth in one domain outpaced the other to produce rather lanky, awkward prose. Other times, development was less obvious: In Penny's case, there were few gawky growth spurts, but her final essay is one of the best, as measured both against our variables and as reflected in Sterling's comments.

We offer two ways to interpret uneven patterns of development. The first is to see them as evidence of a predictably uneven developmental process. Rarely is a skill such as writing from documents first absent, then learned, and then always solidly and reliably present afterward. More often, development proceeds as a child learning to walk, with awkward first approximations, ongoing attempts, and some setbacks as the skill is adjusted to new contexts or additional constraints. The second is to consider that students were learning to solve a complex, ill-structured problem—one that has more than one problem space, requires management of multiple constraints and simultaneous goals, and can be "solved" in more than one way. The simultaneity and complexity that we dissected and ordered on the page through a series of analyses, categories, and schemas were negotiated by the students on their own, in real (and limited) time. Therefore,

explanations of performance required not only identifying patterns of organization or document use but also understanding interactions between them. Just as growth did not fit a smooth curve, performance could rarely be predicted by any absolute principles (i.e., students will be most likely to use documents by familiar authors).

Academic Literacy: Patterns for Instruction

In considering what our study suggests about nurturing document-based writing in history, we asked why students learned what they did and why they did not learn more. This study strongly suggests that excellent history instruction, such as Sterling's—instruction that engages students in a discipline rather than a class, provides a rich array of primary and secondary source readings rather than one authoritative but authorless textbook, involves students in active discourse aimed to reason about core disciplinary ideas using textual evidence rather than about chapters using worksheets, and invites students to act as authors constructing an evidenced argument rather than as memorizers of content—can support the development of complex writing skills even when these writing skills are not the object of explicit instruction.[19]

Immersed in this rich discourse community and curricula, our students did learn, but why didn't they learn more? Although Sterling's comments about the document-based writing task were consistent, presented a historical sense of the task, and addressed its multiple aspects, students received no instruction or explanation while engaged in the task itself. Sterling had students practice writing under time constraints that allowed for very little unpacking or analysis of the task, consideration of multiple solution paths, careful attention to isolated aspects, or cycles of revision. Little wonder, then, that they reached for well-practiced writing schemas. Finally, students had to move from supported speech to solo writing. Students had daily opportunities to observe, co-construct, and produce oral arguments and explanations in class discourse that could be variously fluid, terse, overlapping, and redundant. However, when producing written arguments and explanations, students needed to manage the entire task themselves; to produce coherent, linear text; and to do so without having student or teacher models or coaching.

How might Sterling and other teachers adapt their instruction to further support development of academic literacy? The nature of

instruction would shift from general coaching through principles to explicit exploratory and explanatory discourse carried out in reference to specific tasks, texts, or episodes of the writing process and intended to increase opportunities to assess and mediate student understanding of the task under scrutiny. There would be an accordion-like movement between activities that stretch out or slow down the task to reveal and help students master its manyfold components and activities that compress and speed up the task to help students see and manage its entirety. Teacher and students would develop, refine, and use language to describe, understand, and evaluate task and text as they exchanged spoken and written commentary (lists, plans, criteria, suggestions, etc.). Various formats of in- and out-of-class activity (group planning, individual writing, pair peer review) would scaffold development from collaborative to individual performance and from spoken to written discourse. Students would have access to multiple models of speech, thought, and text by self, peer, and teacher—models indexed to reveal various reasoning and/or writing processes, task components, text features, and disciplinary criteria. We believe such instruction would increase points of access, attention, and explication for teacher and students, enhancing intentionality and clarity about those features of historical writing that are expected, intended, modeled, scaffolded, taught, and valued.

Academic Literacy: Patterns for Inquiry

To better design, implement, study, and evaluate useful disciplinary writing tasks, we need to remember that writing tasks can serve various goals in a subject matter class. For example, writing from primary documents could be used to help students to learn that history involves controversy and uncertainty, to learn how to synthesize information from multiple perspectives, or to practice using various methods of citation. More generally, history students might write to demonstrate what they have learned about a period (writing to assess), to learn more history through writing (writing to learn), or to learn to produce texts written in the disciplinary genre (learning to write). These are distinctly different purposes, all of which may serve to support academic literacy. We need to be clear about these distinctions. Only then can we analyze intentions, enactments, and outcomes in meaningful ways that consider critical issues of congruence and efficacy.

Our challenge is to nurture higher levels of academic literacy in greater numbers of students. To do so, we need to better understand the nature of content and rhetoric in the disciplines we would teach. We need to examine how particular tasks and their instructional enactments represent a discipline and what is involved in doing such tasks. We need to understand how to support the development of speaking, reading, and writing and how complex combinations of these processes function to support reasoning in a domain.[20] We need to invite and examine student products—written, spoken, or otherwise—as indicators of their emerging understandings. We need to keep in tension the abstract ideals of theories and the local details of data and instruction.

In telling our tale of writing from primary documents as a way of knowing in history, we hoped to examine an instance of and articulate issues concerning academic literacy. The Document-Based Question task was sufficiently rich to invite historical interpretation and synthesis and sufficiently complex to reveal what these disciplinary processes require and what is difficult for the students learning them. The broad naturalistic observation of Sterling and her students provided us with data to situate this particular writing task within the ongoing enactment of history in instruction, curricula, and discourse. Our access to finished student texts spurred us to develop detailed methods of text analysis that might carefully document what students accomplished as evidence of how they understood and undertook the task of writing from primary documents. Combined with our task analyses, our text analyses produced a series of very detailed descriptors of what writing from documents entailed at multiple levels, parsed and indexed components of the task, documented and categorized types of response, and allowed us to be systematic and specific as we discussed the nature and extent of development.

The patterns of development we present were traced in the texts of five students. Although our small sample size did not support statistical analysis, it did allow us to trace deep detailed patterns within and across features and individuals. Future studies might use think-aloud protocols and interview data to enhance interpretation and explanation of the patterns we found. Furthermore, although our data may be limited, the implications for inquiry are rich. Would similar patterns be found if one examined the texts, individual think-alouds, peer conferences, or revision interviews of other students learning to write from documents over the course of a year? How might the

patterns of development differ if one implemented instructional changes such as those described above? How does writing from sources proceed when the task is not also exam practice, as in a long-term assignment in which the topic and sources are student selected? How do different tasks compare in terms of their ability to lead to integrated interpretation? There is a dynamic tension and resonance between the layers of issues involving what it means to know history, how instruction and task evoke history, and what writers do when learning to write in history. We offer our constructs of organization and interpretation and our schemas for knowledge telling and transformation as tools for parsing the complex task of writing from historical documents and as ways to articulate aspects of and developmental moments along the dimensions of historical knowing.

NOTES

1. For discussion of the critical features of Advanced Placement curricula and how it might serve as a model for American education on a broader scale, see American Federation of Teachers (AFT) (1996) and Rothschild (1995).

2. Our study of Sterling was part of a broader program of research that examines the goals, discourse, and practice of various history teachers, students, and practicing historians (Leinhardt, 1994). This work aims to determine what constitutes effective instruction and learning in history and identify how history learning contributes to the development of student reasoning. We have more than a year of Sterling's instruction that was audio- and videotaped then transcribed, pre- and postlesson interviews, all curricular materials, and copies of all written work and notebooks from consenting students. For this study of writing, we selected the five students whose written record was complete.

3. For critical discussions of writing-to-learn issues that question whether writing is a uniquely powerful mode of learning and the degree to which analytic writing has been privileged, see Ackerman (1991, 1993), Applebee (1981, 1993), Penrose (1992), and especially Smagorinsky (1995).

4. Scardamalia and Bereiter (1984, 1985) propose that there is a dialectic between two problem spaces, the rhetorical problem space of the text and the content problem space of the writer's topic knowledge.

5. Researchers refer to the popular school writing genre that is usually a five-paragraph, three-point piece of prose as the *five-paragraph theme* because technically it is not an essay. However, we use *essay* throughout our article because it is the term that both teachers and students in Sterling's school used and because Advanced Placement materials refer to essay questions and to responses as essays. We also use *topic sentence* when Sterling did rather than the more technically appropriate *thesis statement*.

6. The Sterling study was designed as a naturalistic longitudinal observation of instruction and learning in history. All tasks (including the document-based question) were observed as Sterling enacted them, without asking students to provide think-aloud protocols. Therefore, we analyzed the written products themselves as one major trace of the discourse synthesis process.

7. For a more detailed description of how historians' metasystem knowledge, in the form of schemas and action systems for identification and interpretation, operates when reading primary documents, see Leinhardt and Young (1996). In high school classes, explanations of metasystems often take the form of bits of coaching woven through instruction over time rather than explicit instruction in historiography (Leinhardt, 1993b; Leinhardt, Stainton, Virji, et al., 1994).

8. We have evidence that texts, primary and other, are particularly salient for history students. In a study of analogy use in history classes, students seemed to privilege and develop analogies originally found in text (Young & Leinhardt, in press).

9. We offer these details to underscore that this writing task was validated by external, national, and collegiate sources, and students knew it was critical to an exam that might advance them.

10. Of the teachers we studied, Sterling was the most disciplinary oriented. She loved history as an intellectual pursuit and enthusiastically consumed popular history, historiography, and philosophy of history.

11. We recognize several features that distinguish the Document-Based Question from a historian's ongoing practice: The task is timed, intended as an examination, and students do not locate their own documents.

12. How Sterling evaluated the essays reflects the press of multiple conflicting curricular goals. Sterling needed to prepare students for the Advanced Placement exam by covering vast amounts of content and practicing Document-Based Questions. She also had to ensure they passed the district competency writing tasks. Where non-Advanced Placement classes had frequent explicit instruction on district tasks, Advanced Placement students did not. Thus, Sterling used the district rubric rather than the Advanced Placement Document-Based Question rubric to score Document-Based Question essays. For each of six district standards (such as "Evidence is accurate factual information, relevant to the topic statement"), Sterling gave a 1 to 4 rating. She did not use these ratings as a grade but instead stressed that students should use all numbers and comments to guide improvement.

13. The first critical issue essays provided a sense of how students wrote on entering Sterling's class and under relatively unconstrained conditions: They had a familiar topic (the colonial period is discussed across grade levels) and no documents.

14. In identifying these classifications, we were informed by and adapted other taxonomies of logical relations (see, e.g., Greene, 1994; Meyer, 1985).

15. There were often local causal connects made in list and specified list essays. In a causal pattern essay, text had a narrative macrostructure, and most idea units were linked causally.

16. To appreciate this complexity, consider how, when writing the theoretical background section of a paper, it is much easier merely to make one iconic reference to each source than to parse and distribute multiple subtler points of content at salient locations throughout one's paper.

17. This type of writing is not unusual for writers entering disciplinary discourse and appropriating academic language (Bartholomae, 1985).

18. Sterling's written comments often noted when the range of factors/documents was limited or when a critical document was missing or mangled.

19. Although students spent about 130 hours in this rich discourse community, they spent only four 1-hour episodes actually writing their Document-Based Questions and perhaps another 3 hours engaged in distributed in-class discourse directly pertaining to these questions. In one sense, growth in student ability to produce Document-Based Questions emerged from about a 6-hour intervention aimed at the task itself.

20. For discussion of how various combinations of reading and writing activities create different traversal routes through a conceptual domain, see McGinley and Tierney (1989).

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The famous Awk is a well-known designation, but this label does not refer to a well-defined concept. The authors report here on an empirical study of the predominant types and patterns of awkward sentences in student writing. They suggest that four general types of syntactic problems—mismanagement of clause structure in errors of embedding, of syntax shift, of parallel structure, and of direct/indirect speech—are associated with four general patterns of semantic problems—mismanagement of idea structure in errors of subordinating ideas, of starting and finishing ideas, of adding ideas, and of incorporating ideas from sources. The authors argue that awkward sentences arise from a complex combination of semantics and syntax, as student writers struggle to manage the relationships among multiple ideas as well as the relationships among multiple clauses. These findings are used to suggest a number of possible pedagogical approaches to the problem of awkward sentences, including the use of read-aloud editing, the targeted teaching of grammar for syntactic editing, and the separation of ideas from sentence form for semantic editing.

The Awkward Problem of Awkward Sentences

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"College student[s] have a lot of pressure on them being high achievers."

Awkward syntax is like an awkward adolescent, the gangly teen who knows how to walk but whose progress is unseemly. Like the unmanageable arms and legs belatedly following their torso in an adolescent gait, the multiple ideas and clauses of the inexperienced writer move along not quite in synchrony, lacking the clarity, correctness, and style that experienced readers expect of the fully emerged

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writer. That awkwardness, of both body and language, is a predictable stage in becoming competent, as both walker and writer, and accounts for the regularity with which that label is invoked. Labeling a sentence awkward, however, is an intuitive and composite designation, referring vaguely to syntactic and semantic problems at the intersection of grammar, meaning, and style.

When teachers and researchers in composition call a sentence awkward, they typically do not define awkwardness as easily as they might be able to define a well-known grammatical error such as subject-verb agreement or an easily recognized stylistic faux pas such as the inappropriate use of formal or informal language. The designation *awkward* actually straddles many definitional lines—between the correctness and incorrectness of grammaticality and ungrammaticality, between the felicity and infelicity of appropriate and inappropriate style, between the clarity and murkiness of coherently and incoherently developed ideas. Further complicating matters, these lines may be drawn differently for different observers. Some teachers and researchers focus on the domain of correctness and grammaticality, labeling problematic sentences in terms of their violations of specific grammatical rules. Other teachers and researchers focus on the domain of style, assigning most problematic sentences to this less well-defined domain. Still other teachers and researchers focus on the domain of semantics, analyzing problematic sentences primarily as the incoherent development and expression of the writer's ideas. There is no well-defined line that separates an awkward sentence from an ungrammatical or incoherent one, nor is there a well-defined line that separates an awkward sentence from a grammatical and coherent one. The designation awkward resists a single, precise definition and remains a protean one, indicating a problem at the intersection of grammar, meaning, and style.

In practice, the designation awkward, or, more commonly, *awk*, is perhaps best known as a catch-all mark on students' papers, signaling a need for editing at the syntactic level or for rethinking at the semantic level. To an experienced teacher, awkwardness can sometimes seem frustratingly individual, best defined—if it can be defined at all—as the idiosyncratic problems of an individual writer or even the unique difficulties of an individual sentence. In their study of errors in student writing, Robert Connors and Andrea Lunsford (1988) describe awkward sentences somewhat circularly as garbled sentences, also noting that awkwardness reflects "the sheer difficulty of explanation presented by some error patterns" (p. 404).

As described in the following literature review, awkward sentences typically have received attention as one of a number of grammatical and stylistic problems of student writers (Christensen, 1968; Shaughnessy, 1977; Williams, 1990). However, empirical studies focusing specifically on the details of the syntax and semantics of awkward sentences are less common. Based on a method that collects and analyzes sentences intuitively labeled as awkward in a body of student texts, this article reports on the predominant types and patterns of awkward sentences in student writing. We argue that four general types of syntactic problems—mismanagement of clause structure in errors of embedding, of syntax shift, of parallel structure, and of direct/indirect speech—are associated with four general patterns of semantic problems—mismanagement idea structure in errors of subordinating ideas, of starting and finishing ideas, of adding ideas, and of incorporating ideas from sources. In general, we suggest that as student writers reach for more complex meanings in their sentences, awkward constructions often result from the need to manage both multiple ideas and multiple clauses. Under this view, awkward sentences are the result of the complex combination of syntax and semantics gone awry. This general finding underlies the pedagogical implications of the study, which include suggestions for teaching techniques of syntactic and semantic editing.

BACKGROUND

Over the past 30 years and more, the problem of awkward sentences in student writing has received attention as both a pedagogical problem and as a research problem. The treatment of awkwardness as a pedagogical problem in textbooks and handbooks reveals the lack of a common definition for this term. Should an enterprising student look up the designation awkward in a textbook or handbook, he or she might not even find it defined: the popular *Writing With a Purpose* (McCrimmon & Trimmer, 1988) and the comprehensive *Heath Handbook* (Mulderig, 1995), for example, both list the symbol *awk* in their guide but have no reference to any accompanying section or chapter. Other texts and handbooks define awkward syntax semantically: for example, the *Simon & Schuster Handbook for Writers* (Troyka, Dobie, & Gordon, 1993) describes awkward sentences rather obscurely as "sentences that send unclear messages" (p. 311). When texts and hand-

books consider awkward constructions syntactically, however, they typically list a bewildering variety of problems as the explanation for the symbol *awk*. For instance, *The Riverside Handbook* (Beene & Vande Kopple, 1992) suggests that awkwardness might arise from a number of errors, including faulty predications, the use of *when* or *where* in definitions, mixed constructions (unnecessarily doubled subjects or direct objects), faulty parallelism, and faulty comparison. *The Holt Handbook* (Kirszner & Mandell, 1995) follows a similar taxonomic approach, listing parallelism, overloaded sentences, incorrect sentence structure, shifts in tense or mood, illogical relationships, faulty appositives, incomplete or illogical comparisons, and the use of proscribed constructions such as *is when, is where,* or *the reason is because*. These pedagogical sources reflect the lack of even informal consensus on the definition and classification of awkward sentences, although the prevalence of the term in handbooks indicates its generally suggestive characterization of problems in student writing.

The treatment of awkward syntax as a research problem in composition studies similarly reveals the lack of a common definition for this term, although there does seem to be some consensus that coordinated and subordinated ideas in multiclause sentences are somehow mismanaged in sentences that are regarded as awkward. In the 1960s, for example, Francis Christensen (1968) considered awkwardness a problem of immature writers, a matter of students writing simple sentences rather than cumulative ones with multiple free modifiers correctly coordinated and subordinated into longer and more elegant sentences. Frank D'Angelo (1975) continued this work with more specific attention to subordination in sentences. Likewise, current work on sentence combining concentrates on teaching students how to lengthen their sentences with appropriate patterns of coordination and subordination (Daiker, Kerek, & Morenberg, 1985, 1994).

In the 1970s, however, Mina Shaughnessy's (1977) groundbreaking *Errors and Expectations* significantly broadened the profession's perspective on awkward sentences. Rather than situating awkward sentences solely in the domain of grammar, which is the underlying assumption of handbook descriptions and sentence-combining exercises, Shaughnessy situated the problem of awkwardness in the domain of style. For Shaughnessy, awkwardness is a necessary stage of learning and development in the process of an inexperienced writer becoming a more experienced and competent writer. Even after 20 years, Shaughnessy's definition of an inexperienced writer and the awkward characteristics of his or her writing still stands: "The unfamiliarity with what might be called the dialect of formal writing leads some writers to affect the style without having mastered it. The result is an unconscious parody of that style, often a grotesque mixture of rudimentary errors, formal jargon, and strained syntax" (p. 45). Shaughnessy thus separates errors in grammar from infelicities in style, assigning strained and awkward sentences to the latter domain. Shaughnessy continues to separate grammar and style in her description of an experienced writer: "He struggles for aptness and meaning, not merely correctness. Syntax, for him, is largely a concern of style" (p. 44). The task of an inexperienced writer, Shaughnessy notes, is a complex one of syntax, semantics, style, and meaning, "reaching beyond the simple sentence—attempting, often without success, to articulate through structure and the idioms of relationship such connections as sameness and difference, causality, temporality, condition, importance, or attribute" (p. 77). In her chapter on syntax, Shaughnessy identifies errors of consolidation as one of the chief causes of awkward sentences, arguing that writing well "has much to do with the ability to consolidate sentences—that is, to subordinate, syntactically, some elements of an idea or statement to others and to conjoin other elements that are clearly of equal semantic weight" (p. 51). Consolidation errors are thus seen as problems in managing meaning as well as form: Inexperienced writers can mismanage the relationships among ideas in a sentence and/or they can mismanage the syntactic construction of sentences with coordinated and subordinated phrases and clauses.

Using this new conception of error, researchers have developed a large body of literature built on Shaughnessy's (1977) ideas about the developmental nature of inexperienced writers (Bartholomae, 1985) and their specific difficulties in managing the complicated syntax of sentences with multiple ideas and clauses. Focusing on the sentence level, Glynda Hull (1985, 1987) examines errors and devises strategy-based definitions, presenting specific ways to improve sentences rather than simple labels for diagnosing their problems. Similarly, Martha Kolln (1991) argues for a conception of grammar that incorporates "thoughtful discussion of choices in generating and combining and manipulating sentences" (p. 149). Focusing on the level of style and discourse, Joseph Williams (1990) attempts to move student writers away from what he calls the virtual blandness of simple sentences and the tangled prose of uncontrolled long sentences, paying special attention to the relationship between important information and the prominence of the end of a sentence. Similarly, Rei Noguchi (1991)

argues that written language typically places new information in that end position, a significant difference from oral language.

Even in these research studies, however, no precise definition of the term *awkward* emerges. In *Rhetorical Grammar*, Kolln (1991) does not offer a specific discussion of the concept awkward at all. Hull (1985) and Noguchi (1991) acknowledge that the lines between grammaticality, ungrammaticality, and awkwardness are not clear: Hull notes that "it is not so easy . . . to devise a taxonomy whose categories are discrete" (p. 169), and Noguchi conflates these categories when he notes that a problematic sentence can be "awkward or, to some, ungrammatical" (p. 55). Similarly, Williams (1990) calls tangled sentences awkward, but he notes that "neither awkward nor turgid are on the page. Turgid and awkward refer to a bad feeling behind my eyes" (p. 17).

Despite the lack of consensus on a definition of the term awkward, all of the researchers and teachers cited above hold some version of Shaughnessy's view that the sentence-level problems of an inexperienced writer result from his or her struggles with more complex meanings and more complicated forms. Given this general consensus, then, what the following study adds to this literature on the problem of awkwardness in student writing is a return to Shaughnessy's methods of analyzing a body of student texts on the sentence level, not to try to establish a precise definition of the term awkward but to provide an empirical description of the specific types and patterns of awkward sentences in student writing.

METHODS

Our database for this study comes from a body of English Proficiency Exams, a writing examination taken by college juniors and seniors at our own large, urban university. On first consideration, data from a writing examination could be regarded as a problematic source for awkward sentences. Composition researchers have long argued that a testing situation rarely produces students' best writing, given that students may be producing a single draft under time pressure, without sufficient opportunity for planning and revision (Elbow & Belanoff, 1986). The writing collected from such a situation may thus reflect errors of carelessness rather than errors that remain after careful consideration. On the other hand, data from a writing examination

also can be regarded as an acceptable source for awkward sentences, primarily because it removes writing from the situation of an English class or any other class. A testing situation produces students' own writing, not writing composed in collaboration with a composition teacher or in a directed assignment for a class. Furthermore, there is much long-standing evidence to show that students mostly write in single-draft form when they write outside of English classes (Bereiter & Scardamalia, 1987; Geisler, 1994; Perl, 1979; Pianko, 1979). The writing collected from such a situation may thus reflect common errors that cry out for pedagogical attention and useful intervention. We chose this particular database, then, because the essays presumably reflect students' decisions about writing for an academic audience, at the sentence level as well as discourse level. The writing in these essays arguably reflects the strengths and weaknesses of college-level writers when they write independently for an academic audience.

This study is based on a set of 364 English Proficiency Exams that were administered in January 1995. Using a random number procedure (Lauer & Asher, 1988), a representative sample of 100 essays was chosen from this set. The study procedure then was designed by the senior researcher (Barton), who gave research team members Halter, McGee, and McNeilley instructions to read the 100 essays and to use the designation *awk* to mark sentences they considered awkward. Each essay in this set of 100 then was read independently by the three readers, who designated a total of 271 sentences as ones with awkward constructions of some kind. Because all three of the researcher-readers are experienced composition teachers (with 4, 15, and 8 years of teaching experience for Halter, McGee, and McNeilley, respectively) and because they were not provided with any preformulated definition of awkwardness before participating in the analytic portion of the research, this body of sentences presumably reflects the intuitive designation and definition of awkward sentences in practice in the profession.

It is important to note, though, that there was considerable variation in designating awkward sentences among the three researcher-readers. Although some sentences were marked awkward by all three readers, more often a sentence was marked awkward by only one or two readers. These three researcher-readers apparently drew different lines between grammaticality, ungrammaticality, and awkwardness. For example, one researcher-reader who regularly uses handbook

terms in correcting student papers (McGee) labeled fewer sentences awkward because she regularly works with a wide range of grammatical terms. Another researcher-reader who regularly uses read-aloud editing in conferencing (McNeilley) labeled many sentences awkward because she regularly uses the designation *awk* as a heuristic to draw students' attention to the sentence level. To construct a database that reflected both the consistency and variation in the practices of the profession, however, we included in the database of 271 sentences any sentence marked awkward by at least one reader.

Using the sentences from one subset of 33 exams with 101 sentences designated as awkward, all members of the research team together conducted a pilot study to identify and define categories of awkward sentences and to exclude categories of error that were not problems in the awkward construction of a sentence. In a series of group meetings, we first decided on general inclusion and exclusion criteria. Although readers had not intended to include sentences with lower level grammatical errors such as number agreement, comma splices, or run-ons, a few of them slipped into the corpus and were eliminated. Also, sentences that were deemed awkward primarily because of problems at the word level also were eliminated because the focus of this study is on sentence construction. Sentences with extra words, missing words, word choice errors (e.g., nonidiomatic prepositions such as *We are at a constant struggle* rather than *We are in a constant struggle*) and sentences whose main problem was wordiness were eliminated. Of the 101 sentences, 36 were eliminated using the general inclusion-exclusion criteria.

As the pilot study meetings continued, we analyzed the grammatical structure of the remaining 65 awkward sentences, beginning with syntactic analysis because this way of looking at sentences is relatively well defined (Quirk, Greenbaum, Leech, & Svartvik, 1985). We identified four categories of awkward syntax. Each category is listed below with an example sentence:

(1a) Embedding
Many years go by and sons and daughters do not even live in the same state any more *only to come back for the holidays.*

(1b) Syntax shift
The data represents / *eighty-five percent of the automobiles* / are moving or obeying the laws of driving an auto.

(1c) Parallel structure
Family life is eroding because of gender liberation, divorse (sic), teenage sex, and lastly, *because of people['s] morals just aren't what they used to be.*

(1d) Direct/indirect speech
Single-parent headed households, *24.0% which includes mother only with 21.6% and father only 3.1%*, so sadly to say that with the divorce rate on the rise [and] high unemployment[,] some fathers are choosing to leave their families so that they can find employment in other places.

Embedding proved to be the most common cause of awkward syntax, with 32 sentences (49% of the sample) revealing problems with students' ability to manage embedded dependent clauses. Syntax shift was the second most common cause (accounting for 15 sentences, or 23% of the total sample), and parallel structure was the third largest (with 9 sentences, or 14% of the sample). Direct/indirect speech was the smallest of the four categories, accounting for only 7 sentences (11% of the sample), and 2 sentences (3% of the sample) were classified as "other."

Before presenting operational definitions for these categories, a brief discussion of these sample sentences will help to illustrate some of the difficulties we encountered in syntactic categorization. Two problems are apparent from these example sentences: first, the problem of compounding factors, primarily word choice and wordiness; and second, the problem of identifying a primary category. Sentence (1c), for example, illustrates the compounding problem of faulty word choice. We classified (1c) as a problem in parallel structure because the italicized *because of people[']s morals just aren't what they used to be* is a subordinate clause rather than a fourth noun phrase in the list under construction, but this subordinate clause has a problem on the word level as well, with its use of the compound preposition *because of* rather than the subordinate conjunction *because*. Many sentences that are designated as awkward have the compounding problem of wordiness, as illustrated particularly well by (1d): The inclusion and categorization of this sentence as one with problems in incorporating direct speech, however, is based on the italicized portion of the sentence, which attempts to report statistical data from the exam prompt. More problematically for a classificatory procedure, many sentences that are designated awkward have more than one possible category and explanation, even at the level of syntax. Again, (1d) illustrates this: Although we categorized the italicized constituent as a problem in

incorporating direct speech, it also could be categorized as a problem in parallel structure because the three percentages (24% *which includes. . .*, *with 21.6%*, and *father only 3.1%*) do not receive parallel treatment.

In our pilot meetings, we discussed and negotiated the syntactic categorization of sentences, finally assigning each sentence to a category based on emerging agreement about its primary problem. The need for extended negotiation of many such sentences, however, made us aware that even the syntactic categorization of awkward sentences is not a matter of simple agreement but of complex analysis and negotiated judgment.

Even though syntactic categorization is not a simple matter of matching a sentence to a problem, the pilot study nonetheless did reveal the predominant categories of awkward syntax that appeared in the sample sentences. For the full study, then, we continued to use syntactic analysis as an initial categorization and developed operational definitions for each of the syntactic categories of awkward sentences. Our category definitions were based on the descriptive grammar of English developed by Quirk et al. (1985), the taxonomy of syntactic derailments developed by Shaughnessy (1977), the set of stylistic features developed by Williams (1990), and the description of quotation and paraphrase conventions developed by Spatt (1987):

(2a) Embedding
The category of embedding included any problems in using dependent clauses, including finite subordinate clauses, finite nominal clauses, finite relative clauses, finite complement clauses, and nonfinite participial or infinitival clauses (Greenbaum, 1989, chap. 6; Quirk et al., 1985).[1] In (1a), for example, the writer has correctly chosen to use a nonfinite clause but incorrectly used an infinitive clause (*only to come back for the holidays*) when a participial clause would be correct (*only coming back for the holidays*).

(2b) Syntax shifts
The category of syntax shifts included any sentences that began with one syntactic structure, creating expectations for a limited number of possible completions, and then incorporated another structure that violated those expectations (Shaughnessy, 1977, pp. 49ff.). In (1b), for example, the sentence begins with the subject-verb predication of *the data represents*, setting up the expectation that the noun phrase *eighty-five percent of the automobiles* functions as the object of the predication. However, the writer uses the noun phrase *eighty-five percent of the automobiles* as the subject of a second predication *are moving or obeying the laws of driving an auto.*

(2c) Parallel structure
The category of parallel structure included any sentences with coordinate elements that were not of the same grammatical category (Williams, 1990, pp. 137-139). In (1c), for example, the list begins with three noun phrases, but the final element is a subordinate clause rather than a noun phrase.

(2d) Direct/indirect speech
The category of direct/indirect speech included any sentences with problems incorporating quotations, paraphrases, or summaries of source material (Quirk et al., 1985, chap. 14; Spatt, 1987, chap. 2). In (1d), for example, the italicized material from the essay prompt is incorporated with a noun phrase containing an incomplete relative clause (*24.0% [of which] include [a] mother only*) and two incomplete phrases (*with 21.6%* and *father only 3%*).

After establishing these operational definitions, we turned to the database of 170 sentences.

All four researchers independently coded each sentence, using the inclusion/exclusion criteria and the four categories defined above. When we first compared ratings, the initial interrater reliability was woefully low—58%. When we looked at sentences where ratings differed, however, we found the familiar problem of sentences that could fit in more than one category, as illustrated by the examples in (3):

(3a) Father[s] started out poorly in the 1970's make up only 1.1% of the "head of household."

(3b) To support the fact that men drink more than women is, the survey showed only 35% of men drank at levels below the definition of bingeing (sic) while 45% of women surveyed drinking below the definition of bingeing (sic).

(3c) This is why the importance of having an academic achievement as being part of today[']s depiction of kings and Queens is held so strongly because it does not only give the opportunity to all—but this opportunity is fair to achieve by all.

Because it integrates material from the essay prompt, sentence (3a) could be classified as a problem of awkwardly incorporated indirect speech. The sentence also could be classified as having a problem with syntax shift because the first part of the sentence, *father[s] started out poorly in the 1970's*, constitutes a full subject-predicate structure, but the second part of the sentence shifts into a second verb phrase predication, *make up only 1.1% of the "head of household."* The sentence even could be classified as a problem in embedding because the second part

of the sentence could be revised into a nonfinite clause, *making up only 1.1% of the "head of household."* Similarly, sentence (3b) could be classified as a syntax shift or as a problem incorporating direct/indirect speech. The sentence could be a syntax shift because the initial subject-linking verb construction *to support the fact that men drink more than women is* is not completed with a subject complement; instead, the writer shifts directly into an independent clause as though the first part of the sentence were a dependent infinitive clause: *to support the fact that men drink more than women, the survey showed [that]. . . .* The sentence also could be classified as a problem in direct/indirect speech because that shift and other shifts in the structure (e.g., *while 45% of women surveyed drinking below the definition of [binging]*) were reports of information from the source. Sentence (3c) has multiple problems: Compounded by wordiness, the sentence has several awkwardly embedded nonfinite dependent clauses—*as being part of today['']s depiction of kings and Queens* and *to achieve by all*; it also could be classified as awkward based on its lack of parallel structure in the *because* clause. After discussion to ascertain agreement, we ultimately classified sentences (3a) and (3b) as problems in direct/indirect speech because the syntactic problems arose directly from the use of information from the source material, and we classified sentence (3c) as one with problems in embedding.

Given the variability in the sentences and in the interpretation of the primary problem leading to the designation awkward, we again used group meetings to review each sentence in the study, ultimately agreeing on a primary designation for each sentence. The final coding for each sentence thus emerged as a matter of consensus. Methodologically, this procedure is less than ideal because the goal of a classification procedure is to develop a coding schema that works across trained raters. But the complex realities of analyzing the multiple causes of awkward syntax in a given sentence make such reliability unlikely in principle, and our experience in classifying sentences differently bears this out. Thus, our categories of awkward syntax are more heuristic than definitive, more nonformally interpretive than formally exhaustive. Keith Grant-Davies (1992) reminds us that all coding systems ultimately are interpretive in these ways:

> Coding organizes data, allowing researchers to abstract patterns by comparing the relative placement and frequency of categories. It gives them a system by which to demonstrate these patterns to other readers, and it provides researchers with a perspective from which to view the data. . . . Division and classification are interpretive acts. That is to say, they involve reader-researchers in the creation of meaning, rather than simply in the extraction and conveyance of meaning that already exists in the data. Researchers construct meaning with the data, identifying patterns and looking for answers to their questions. (pp. 272-273)

Table 1
Findings

	n	%
Total sentences	170	
Sentences excluded	79	
Total sentences with awkward constructions	91	100
Embedding	38	42
Syntax shift	27	30
Parallel structure	18	20
Direct/indirect speech	7	8
Other	1	<1

The coding system developed in this study thus stands primarily as a heuristic guide to the syntactic analysis of sentences designated awkward, not as a definitive system for objectively classifying every such sentence. The system has empirical grounding but not formal certainty. It is intended to suggest verified patterns in awkward syntax, but it cannot pretend to predictive and exhaustive coverage across different sentences and different raters. Instead, the coding system in (2) allows researchers and teachers to work toward clarifying the designation of awkward syntax, but the borders of the categories and of the system itself are more fuzzy than discrete, providing, as Grant-Davies (1992) says, an interpretive perspective on the data.

FINDINGS

Awkward Syntax

With all of these methodological qualifications in mind, we present the results of the syntactic portion of our study in Table 1.

Working with a database of 170 sentences, we used the general inclusion-exclusion criteria to exclude 79 of these sentences because

their problems were deemed grammatical or word related. Sentences such as those listed in (4) below were eliminated because their problems were those of word choice (4a) or wordiness (4b):

(4a) The way society has put emphasis on beauty and talent as the normal [norm] for Homecoming has left most college students out of the race.
(4b) It is my opinion that as this country becomes more aware and accepting of the differences we all possess, examples of our breaking with tradition and recognizing and celebrating our uniqueness, as was seen at these three Universities[,] will continue and receive the same welcome that these three women did.

For the remaining 91 sentences, categories of awkward syntax appeared with a frequency that followed the general distribution found in the pilot study: embedding (with 38 sentences, or 42% of those included in the database), syntax shift (with 27 sentences, or 30%), parallel structure (with 18 sentences, or 20%), direct/indirect speech (7 sentences, or 8%), and other (1 sentence, or < 1%).

The most common syntactic cause of awkwardness was some kind of problem in embedding, which occurred when students wrote sentences that mismanaged types of dependent clauses and the relationships between them. Some interesting examples of awkward embedding appear below:

(5a) College student[s] have a lot of pressure on them being high achievers.
(5b) It is my opinion that one of the primary reasons for which the newsmedia (sic) lends itself to such exaggerations in their coverage of health risks is entertainment.
(5c) This article shows that the tradition of a Homecoming Queen should be young, good looking and have a perfect body, can be changed.

Sentence (5a) has the awkward nonfinite dependent clause *being high achievers*, but it is not clear whether this clause is simply dangling far from its implied subject (*Being high achievers, college students have a lot of pressure on them*) or whether it is the wrong type of nonfinite clause (*College students have a lot of pressure on them to be high achievers*). Sentence (5b) has multiple problems in embedding compounded by wordiness. By using the wordy introduction *it is my opinion that*, the writer has set up the gist of the sentence in a nominal clause: This clause, however, has a wordy subject—*one of the primary reasons*—followed by a long and awkward modification of the subject noun

phrase—*for which the newsmedia. . . .* The main problem here is in the choice of a relative clause introduced by the prepositional *for which*: Perhaps because the writer had just used the word *that*, he or she did not use the standard nominal clause complementation *one of the primary reasons [that] the newsmedia lends itself to such exaggerations in their coverage of health risks*. The length of this wordy dependent clause complicates the clarity of the higher nominal clause as well, putting quite a distance between the subject *one of the primary reasons* and the predicate *is entertainment*. Sentence (5c) illustrates the interaction of embedding, syntax shift, and parallel structure. Using the preposition *of*, the writer seems to start modifying *tradition* with a prepositional phrase but then presents a full independent clause with internal problems of parallelism—*a Homecoming Queen should be young, good looking and have a perfect body*. One of two patterns of embedding is possible here. The writer could keep the finite clause by embedding it into a nominal clause—*the tradition that a Homecoming Queen should be young, good looking and have a perfect body*—or, with revision, the writer could make the clause nonfinite: *the tradition of a Homecoming Queen [being] young, good looking and [having] a perfect body*. As in sentence (5b), the student writer may not have wanted to use two instances of *that* closely together in the sentence, mitigating against the construction of a nominal clause. As in sentences (5a) and (5b), however, the student writer does not seem to be able to construct and manage dependent clauses very well.

Our data suggest that the second most common cause of awkwardness was syntax shift, which occurred when students wrote sentences that incorrectly merged two structures. For instance:

(6a) I say this because the candidates that have no extracurricular activities, he/she may only want the title to glamorize themselves.
(6b) The statistics of teen mothers today are the most prominent number of single parent families in America today.
(6c) These example[s] show that it[']s not how you look on the outside but what you are on the inside is what makes you a beauty Queen or king.

Sentence (6a) is a classic example of a syntax shift. In (6a), the introductory *I say this because* sets up a subordinate adverbial clause that requires a subject-predicate construction. Although the noun phrase *candidates that have no extracurricular activities* could serve as the subject, the student writer has neglected to provide a predicate for this

subject, instead shifting to a new independent clause *he/she may only want the title to glamorize themselves*. Sentence (6b) is an example of a sentence that could have been coded either as a word choice problem or as a syntax shift. The problem in (6b) could have been designated as a word choice problem because the writer used *be* as an all-purpose verb rather than specifying the exact connection between the two parts of the sentence. In our discussion of this sentence, however, we saw the problem with (6b) more as syntactic than lexical. Most of the possible ways to improve this sentence would include specifying the exact connection between the parts of the sentence by using a more elaborate syntactic structure—for instance, *The statistics of teen mothers today [show that families with a teenage mother] are the most prominent number of single parent families in America today*. We thus coded (6b) as a syntax shift because this revised version required the two parts of the sentence not to be in a simple subject-subject complement relationship but in a more complex construction of subject-verb-nominal clause object. Like (6b), which rested on the borderline of inclusion-exclusion criteria, sentence (6c) illustrates some of the fuzzy borders within the coding categories, specifically between the category of syntax shift and the category of direct/indirect speech. Sentence (6c) is clearly an example of a syntax shift: The first part of the sentence introduces a nominal clause direct object with its opening construction *These examples show that*; the writer then sets up but mismanages the idiomatic clausal structure *it's not X but Y that Z*. This clause should read *it's not how you look on the outside but what you are on the inside [that] makes you a beauty Queen or king*. Instead of finishing the idiomatic construction with a final *that* clause, though, the writer shifts into a verb phrase *is what makes you a beauty Queen or king*. It is possible that the writer looked back only to the second half of the initial construct, shifting into a slightly different idiomatic structure—*what you are on the inside is what makes you a beauty Queen*. However, as it stands in (6c), the sentence shifts in the management of its idiomatic structure. Interestingly, this shift could have been designated as a problem of awkward indirect speech incorporated from source material, especially if we had defined source material broadly enough to include colloquialisms and other common sayings and quotations.

The third most common cause of awkwardness in this set of data is the problem of managing parallel structure, perhaps the most familiar category of the four being described here. Some representative examples of structures that lack parallelism are listed below:

(7a) Normally these discussions involve insights on who is the prettiest girl on campus, who is the most popular guy with the girls and if they are outgoing or not.

(7b) We are not teaching them to help their fellow man, sometimes at a personal expense to themselves, nor knowing and loving their neighbor.

Sentence (7a) involves a typical problem in parallel structure—two singular relative clauses with *who* pronouns, followed by one out-of-sync plural *if* clause. Sentence (7b) is a slightly more complex example. The first infinitive clause *to help their fellow man* is followed by a nonrestrictive modifier, *sometimes at a personal expense to themselves*, but the modifier apparently derails the writer's sense of parallelism: After using the conjunction *nor* to get back to the list, the writer then uses participial rather than infinitival forms.

Embedding, syntax shifts, and parallel structure account for the majority of awkward sentences in our data (83 sentences out of 91, or 91%), but the final category of awkwardness—the problem of direct/indirect speech—is especially significant within expectations for academic writing. Some problematic examples of students mismanaging quotation and paraphrase with direct/indirect speech include the following:

(8a) The study indicates that men responded slightly higher than women to binge drinking.

(8b) With the one parent household, 21.6% in our society being a mother, these kids grow up without a father figure.

(8c) In reading the passage on the current demographic trends stating that by the turn of the century step-families and single parent headed families will define the experience of American childhood in America, and that fluid families are "better for adults than they are for kids," I agree with this statement but disagree that "children of disrupted families are at higher risk than their peers to live in poverty, fail at school, run afoul of the law and suffer long-term emotional and behavioral problems.["]

Sentence (8a) shows how hard comparative constructions can be for student writers who are attempting to paraphrase source material: The student writer apparently wants to report different rates for men and women within a category measuring binge drinking, but the completion of the comparative clause with the prepositional phrase *to binge drinking* does not provide sufficient identifying information

that this is a category of statistics in the source text. Sentence (8b) shows how nonfinite subordinate clauses also can be awkward devices for incorporating information from sources: The participial *21.6% in our society being a mother* needs a fuller verbal head, perhaps along the lines of *21.6% in our society being [headed by] a mother*. Sentences (8a) and (8b) show how student writers often use forms that are not long enough or complete enough for incorporating direct/indirect speech. Sentence (8c) shows how problems with direct/indirect speech can be compounded by problems due to wordiness. The sentence is made extremely long by what may be excessive paraphrase and direct quotation in the participial object of the prepositional phrase *in reading*, and the sentence then follows this lengthy participial clause with the backwards-looking *I agree with this statement*. The student writer might do better here to separate the summary from the response in two sentences, which would eliminate the need for the awkward construction *in reading* (see our discussion of this study's pedagogical implications, below).

In these examples and their description, it is noticeable that many of the sentences have multiple problems and require detailed analysis, even at the level of syntax. This accurately reflects our experience, both in the pilot study and the main study. Although we could sort data into broad categories of syntax, the coding was often a matter of designating a primary syntactic category among the possibilities of more than one category—a difficult task often compounded by other types of problems, such as wordiness and grammatical error. Nevertheless, these categories of embedding, syntax shift, parallel structure, and incorporation do reflect the predominant types and patterns of awkward syntax in the student writing sampled for this study. Moreover, these categories point to a common pattern underlying much of awkward syntax—the mismanagement of clause structure. By definition, problems in embedding are problems in managing clause structure, as illustrated in the sentences in (1a) and (5). Syntax shifts, like the sentences in (1b) and (6), often involve the awkward congruence of two different clause structures. Parallel structure problems less often are solely at the phrase level and more often at the clause level or at the mixed level of nonparallel phrases and clauses, as shown in the sentences in (1c) and (7). Furthermore, the mismanagement of direct/indirect speech also may involve problems in embedding, as in sentences (1d) and (8), where student writers mismanaged the complicated clause structures of sentences while trying to make points based on paraphrased information from the essay prompt. The generalization that awkward syntax is characterized best as the awkward management of clause structure, though, does not by itself provide a full account of the problems in awkward sentences.

Syntax and Semantics

In our syntactic analysis, we defined, coded, and discussed sentences initially in grammatical terms because we were interested in developing and verifying a better description of awkward syntax. But a syntactic description is not all there is to say about awkward sentences. Each syntactic category in the study also indicates problems with managing certain kinds of semantic relationships among ideas. Each of these problems in syntactic structure has a congruent problem in semantic structure; in other words, there are general associations between types of syntactic mismanagement of clause structure and related types of semantic mismanagement of idea structure. The syntactic category of embedding is related to the semantic management of superordinate and subordinate ideas within a single sentence. The syntactic category of syntax shift arises from the problem of failing to finish the first idea in a sentence before starting a second one. The syntactic category of parallel structure is related to the semantic management of adding multiple coordinated ideas within a sentence. And finally, the syntactic category of direct/indirect speech is related to difficulties in simultaneously managing ideas *from* sources and ideas *about* the sources.

The management of superordinate and subordinate ideas in the same sentence, for example, requires syntactic embedding—a combination that often can go awry, as shown by the sentences in (5). In these sentences, the writers are working with two levels of ideas. In (5a), for instance, although the intended interpretation is unclear, the writer may be trying to support the superordinate idea that college students have a lot of pressure on them by including a subordinate idea that college students are high achievers (*being high achievers, college students . . .*). Alternatively, he or she may be trying to elaborate the idea that college students have a lot of pressure on them by specifying that the pressure is for them to be high achievers (*pressure . . . to be high achievers*). In either interpretation, however, the subordinate idea is not well managed semantically because its relationship to the superordinate idea is not clear. In (5b), the superordinate idea in the sentence is an explanation of a reason (*the reason is entertainment*), whereas the subordinate idea in the sentence describes the reason itself (*the reasons*