Discourse Processes

When Law Students Read Cases: Exploring Relations Between Professional Legal Reasoning Roles and Problem Detection

James F. Stratman

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When Law Students Read Cases: Exploring Relations Between Professional Legal Reasoning Roles and Problem Detection

James F. Stratman
Department of Communication
University of Colorado at Denver

This study investigates effects of different legal reasoning roles on first-year law students' case reading and analysis, focusing detection of textual and legal interpretation problems arising within and between related appeal court cases. In a between-subject design, 56 first-year law students received 1 academic and 3 professional role scenarios, each involving a different communicative frame. Scenarios contained instructions to think aloud, while students read the same 3 related appeal court cases. Protocols were scored using a list of interpretative problems developed from pre-experimental task analysis. Results show that detection varies with the communicative frame embedded in different professional roles. On overall problem detection, students in the advocatory and policy scenarios performed significantly better than students in the (academic) class recitation scenario. Advocatory and advisory groups also performed significantly better than students in the class recitation group in detecting critical interpretative problems. Results further showed that students who switched between cases while reading (as opposed to reading linearly) scored significantly better on all problem detection measures. Unlike previous studies of legal case reading, this study contributes to understanding by focusing on interpretative problems located in and between related cases, rather than focusing on readers' accurate recovery of meaning per se.

An exciting development in recent legal education studies is the emerging direct investigation of the cognitive processes of lawyers engaged in legal reasoning and

Correspondence and requests for reprints should be sent to James F. Stratman, Department of Communication, University of Colorado at Denver, Technical Communication Program, Campus Box 176, Denver, CO 80217–3364. E-mail: jstratma@carbon.cudenver.edu

problem-solving tasks. Since Bryden's (1984) and Amsterdam's (1984) early work, increasingly stronger arguments for a cognitive science approach to the study of legal reasoning skill and its development have been made, both inside the law review world and in the educational psychology literature. The issues and opportunities created by framing the challenges of legal education in cognitive terms are now canvassed in a number of papers (Blasi, 1995; Feltovich, Spiro, Coulson, & Myers-Kelson, 1995; Mitchell,1989; Palasota, 1991; Schlag, 1989; Stratman, 1990; Weinstein 1998). A look at these studies reveals two important concerns they have in common.

First, the scholars noted earlier largely agree that the unique difficulties in legal discourse processing are most likely to reveal themselves in the highly contextualized (and often very messy) goals and constraints inherent in real-world lawyering problems. Frequently, the fusion of the lawyer's goals and constraints with a specific social or organizational context is what makes many legal problems so complex. Weinstein (1998), for example, pointed to both the uncertainties inherent in the interpretation of legal discourse and the factual gaps and contingencies in clients' evolving situations as key sources contributing to the "ill-structuredness" of most real-world legal problems (p. 13). If law students do not develop theories for managing these contextual uncertainties, they will be unprepared for the everyday world of real lawyering. As Blasi (1995) remarked, "In every other human endeavor, expertise in problem-solving is acquired by solving problems. There may be better and worse ways to solve problems, but there appears to be no substitute for context" (p. 386). Although a concern for developing practical, context-sensitive lawyering skills is hardly new (e.g., clinical legal programs have long claimed to foster them), the cognitive perspective offers a powerful way of seeing just what these skills entail, a way of making sense out of what often seems chaotic.

The second, related concern shared by these recent cognitive explorations is that the royal road to understanding the contextual features and ill-structuredness uniquely characterizing legal problem solving lies in sustained empirical research. It is hard to go very far in teaching contextualized, legal problem solving if fine-grained descriptive accounts of actual problem solving, preferably with converging types of field and laboratory data, do not exist. Such accounts have been slow to emerge, in part, because they require interdisciplinary collaboration. Moreover, the real potential of the recent prospecting missions into cognitive science noted earlier will not be realized if existing cognitive theory is simply "imported" to legal studies. Too often, such importing results in vague armchair explanations of the general nature of lawyering expertise; or worse, it legitimizes the traditional, frequently rigid ways law schools attempt to promote this expertise.

It would be hard to disagree that direct study of lawyers' problem solving in situated contexts is still in its infancy. Those few studies that have been published are appropriately descriptive and exploratory, thus necessarily directed toward gener-

ating rather than testing theories and hypotheses (Senger, 1993, 1989; Skinner, 1988; Stratman, 1989; Weinstein, 1998). Nonetheless, as Blasi (1995) noted, "We now have the theoretical framework and empirical methods that make it possible to study directly a topic about which law professors have long only asserted knowledge: how lawyers think" (p. 354).

Given agreement about these concerns, then, what is most interesting in the empirical literature on lawyers' cognitive processes is that two potentially related, but so far disconnected types of inquiry have developed concurrently: those investigating contextualized legal problem solving and those investigating legal reading processes. Significantly, a small number of researchers have begun to examine expert and novice lawyers' process of reading legal texts, including cases and briefs, with the aid of cognitive theories and methods. This line of work essentially began with Lundeberg (1987), who compared expert with novice lawyers' reading of legal cases using think-aloud protocols as data collection tools. Her work, in turn, has been followed in studies by Stratman (1994), Deegan (1995), and Oates (1997), as well as in a series of thoughtful essays by Davies (1987), Fajans and Falk (1993), and Dewitz (1996, 1997). The latter essays, in particular, probe the difficulties with critical reading that new law students experience.

Even a casual examination of these legal reading studies suggests robust theoretical connections with the emerging cognitive work on lawyers' contextual problem-solving processes. For example, just as cognitively oriented legal scholars since Amsterdam (1984) have characterized skill in lawyering tasks as involving hierarchically ordered, schema-mediated searches through a problem space, so have reading researchers characterized reading comprehension of unfamiliar texts as involving a schema-mediated, hierarchically ordered search through a reader-constructed space of interpretations. Like efficient legal problem solving, efficient legal text comprehension results when there is a clean match between the schema the reader brings to the text and the schema the text actually contains. In this favorable matching situation, the reader is scarcely aware of interpreting the text at all. However, to the extent reader and text schemas mismatch, more conscious problem solving may be needed. To comprehend an unfamiliar or difficult text, and to construct a meaning from it, is to encounter or invoke a wide range of puzzles. Readers propose and test solutions to some of these puzzles by working backward or forward, delay solving others, and then using firm or tentative solutions as bases for tackling subsequent puzzles that arise from the linear stream of prose (Pressley & Afflerbach, 1995, pp. 79–82).

Despite these parallel theoretical conceptions between reading and problem solving, no empirical research explores the relations between the cognitive processes involved in contextualized legal problem-solving tasks and those involved in the critical reading of legal materials. In particular, how can we know the difference between when students are having difficulties as critical readers and when they are having difficulties as contextually sensitive legal problem solvers, or when

in fact they are having difficulty connecting these two processes with each other? We might suppose that study of one process would inevitably lead to study of the other, because solving most kinds of real-world legal problems involves reading and critically analyzing legal texts. However, so far, studies of contextualized legal problem solving do not look much into problem-solvers' tasks or role-embedded reading processes. Conversely, the studies of expert and novice legal reading do not look into the effects that different legal tasks or roles may play in case reading and analysis processes. In the metacognitive literature on nonlegal reading, different tasks, goals, and purposes for reading have often been shown to affect readers' text comprehension (e.g., Baillet & Keenan, 1986; Hacker, 1998; Mills, Diehl, Birkmire, & Mou, 1995; Otero, 1998; Pressley & Afflerbach, 1995, p. 134; Waern, 1988). From the perspective of reading studies, certainly legal problem solving is an appropriate domain in which to probe whether different tasks and professional roles affect readers' processes.

The purpose of this article is to begin to address this needed linkage in research. This article presents results from an empirical study of law students asked to think aloud while they read a series of related appellate legal cases for different professional problem-solving and communication purposes. The study explores how different kinds of real-world, legal roles may affect students' ability to recognize relevant legal reasoning and meaning interpretation problems arising both within and between cases they read. Before turning to the study design, however, the aforementioned disjunct between the emerging cognitive literature on lawyering and reading studies needs more articulation. To that end, I first review the extant empirical studies of legal reading and legal problem solving. I suggest how these two separate lines of inquiry may begin to approach each other, by employing each other's methods and perspectives. Next, I discuss the basic nature of common law judicial reasoning and its relation to case reading and analysis activity, highlighting some of the unique rhetorical and intertextual characteristics of this genre of legal discourse. The literature review then concludes with a description of different professional legal reasoning and case reading roles that form the basis for this research. This concluding section suggests why investigating the impact of different professional roles on students' detection of rhetorical reasoning problems should become a focus in research on legal case comprehension.

LITERATURE REVIEW: INTEGRATING LEGAL READING AND LEGAL PROBLEM-SOLVING STUDIES

The need for more linkage between investigations can be illustrated by briefly contrasting recent studies, starting with the study of legal problem solving, then looking at studies of legal reading processes. Weinstein (1998) had lawyers think aloud while attempting to represent a (fictitious) client seeking to win a Social Security

Disability (SSD) claim. He explored differences and similarities in how SSD legal experts, subexperts (lawyers with experience but not much SSD specific experience), and novices (law students) would solve an SSD client's problem. He was able to show that these problem solvers differ on several important dimensions, including the following: their use of forward versus backward reasoning, their use of *law* versus *fact* frames in planning and organizing case information, and in their recall and use of particulars contained in the simulated case information provided. However, in detailing these differences, the study provides only a few intriguing glimpses of how lawyers' reading processes may be related to their legal problem-solving processes. For instance, Weinstein did not explain how much of the SSD case file was actually read by each participant, in what order, and how much was skipped; or how much rereading of the case materials occurred, and of what parts. These variables, which are a staple in many think-aloud studies of reading, may have been helpful to measure in Weinstein's study because they could help us understand the extent to which problem-solving processes influence reading or, conversely, the way participants' reading decisions may influence their problem solving. Similarly, an earlier study by Hofer (1987) attempted to infer students' legal reasoning processes psychometrically, using questionnaires, but did not require students to read legal cases.

We can observe the reciprocal need in several recent legal reading studies to investigate the influence of different legal roles and tasks on readers' behavior. In Lundeberg (1987), 10 experts' (lawyers and law professors) and 10 law students' case reading processes were compared, using think-aloud protocols. Specifically, Lundeberg directed all of the readers to serve as teachers and to instruct her as to how to analyze a contract case. She also informed them that, after their reading, she would ask them the types of questions law professors ask in classroom recitation. Lundeberg then charted differences in these two groups' use of specific metacognitive behaviors. These included the following: readers' attention to context markers in the cases (e.g., head notes, parties named, type of court, etc.); the extent to which readers' previewed or tried to overview the case (e.g., by noting the action, summarizing facts, etc.); the extent to which readers analytically reread portions of the case text (e.g., to help clarify something they did not understand previously, or else found contradictory); the extent to which they underlined material; the extent to which they tried to synthesize the legal import of the case (e.g., for the type of law or legal issue it addressed); and, finally, the extent to which they offered evaluations of the court's decision and the way it was reached. Her results showed that more experts engaged in these behaviors than novices. A concern with this study, however, is that the purpose assigned for reading the cases may not have been perceived as especially coherent or clear to the novice readers. As a result, this purpose may not have enabled or motivated them to organize their strategies in the way a more real-world, rhetorically situated legal problem may have enabled them to do.

The more recent studies of law students' reading processes, while taking us somewhat deeper into the problem solving involved in text comprehension and meaning construction, do not yet help us see how reading processes may be shaped by different legal tasks. Deegan's (1995) valuable study, for example, directed law students to think aloud while reading an excerpt from a law review article on enterprise liability theory. The task context for this reading, however, was very similar to that used by Lundeberg (1987). Students were asked to prepare for a simulated class recitation about the article. Deegan did not assign students any sort of professional role or professional problem-solving task as a context for reading.

In Oates (1997), four alternative admission law students and a law professor were assigned to read a four-page section from a torts casebook, including an opinion from a 1912 Maine Supreme Court case. Oates analyzed these readers' think-aloud data using Lundeberg's (1987) metacognitive categories. However, unlike the Deegan and Lundeberg studies, these students were not assigned any particular task, role, or purpose for doing so. Oates omitted such contexts from her think-aloud elicitation directions to investigate Davies's (1987) speculation that what distinguishes expert readers of judicial opinions from novice readers is experts' ability to generate meaningful contexts or purposes for reading. Along with inspecting the think-aloud data for clues to readers' self-assigned purposes, Oates also queried readers after the think-aloud session concerning "how they defined their role when they were reading and briefing cases" (p. 147). Among the four novice readers, only one appeared to assign himself a nonacademic, contextualized role (as if he were judge) for his reading, and this reader appeared to pursue more of Lundeberg's metacognitive strategies than did two of the other readers. Even Oates's lone expert (law professor) remarked at the start of her think aloud that, "I just realized that I can't begin reading until I know why I am reading. Since I got out of law school, I don't just read cases. When I read, I read for a reason" (p. 150). It is interesting to note, then, that Oates's results could be interpreted as supporting the critique of Lundeberg's study offered earlier. Namely, without a purpose rooted in some recognizable professional legal role or problem context, we may not know if we are dealing with students' difficulties as readers per se, or their difficulties with pursuing contextualized legal problem solving, or some missing connection between them.

Legal Case Reading and Legal Reasoning

To understand the challenges involved in case reading, one must understand the basics of legal case reasoning. Put simply, cases record and articulate decisions by courts in response to issues presented by opposing attorneys. As such, cases are also commonly referred to as *opinions.* In a case, a court interprets one or more legal rules by drawing on the facts and reasoning that other courts have used in previously decided cases concerned with interpreting the same rule. For example, a

court might be faced with a question (formally called the *issue*) like the following: Did a trucking company violate an interstate commerce rule when it transported eviscerated chickens across state lines without an Interstate Commerce Commission (ICC) Certificate (Moore, 1981, p. 156)? The court, to decide this question, looks for the most relevant rule to use. Suppose the most relevant ICC rule available is the following: "Objects that are not manufactured products may be carried without an ICC certificate." What the court must now do is to decide if eviscerated chickens can or should be characterized as manufactured products. Opposing parties will have submitted arguments on this question in briefs (Stratman, 1994).

A court may try to answer this question deductively by looking up a dictionary definition of *manufacture* to see if evisceration could logically or validly be categorized as a kind of manufacturing. However, such straightforward deduction has long been shown to be a difficult, if not impossible, basis for most legal decisions (Burton, 1995; Moore, 1981). More typically, a court will look to see if a precedent case exists that has decided whether eviscerated chickens are (or are not) to be considered manufactured products. If no such precedent exists, what courts do is pull together other decided cases that have interpreted and applied the ICC rule to other, hopefully similar, objects—say, eviscerated pigs or perhaps frozen fish. They try to see, if only by analogy, how other courts in other cases have reasoned about the meaning, purpose, and application of the ICC rule. Examining these decided cases, courts may further need to determine which of them may be considered binding (controlling) precedent, such that the court must follow the reasoning in these cases as closely as they can. Typically, precedent cases decided in higher courts are binding on lower courts. This determination as to which cases are authoritative and relevant precedents may look simple on the surface. However, it can become very complex. Even when the relative authority of given precedents are settled, courts must nevertheless take great pains to explain their understanding of the possible relevance of these precedents, that is, to justify their use or exclusion in reaching a decision. In any given dispute, a court may review and explain a substantial number of potential precedents.

By the end of the analysis of facts and precedents in their opinion, a court usually presents what is called its *holding.* The holding is a statement (or set of statements) that interprets a rule and applies it to the facts in the case. Therefore, in the aforementioned example, a court's holding may read as follows:

> We hold that eviscerated chickens and other fowl do not represent manufactured products as the latter term has been applied in previous ICC certificate cases, notably the *Smith* and *Red Line* cases. The defendant therefore was not under an obligation to obtain an ICC certificate.

In this way, holdings do not merely interpret existing law, they change the law itself by modifying its scope and particularity. Textually, holdings can frequently

be very complex, containing exceptions, caveats, or indeterminate language that later legal readers (whether judges, lawyers, or law students) must reckon with.

As this sketch should suggest, cases are intrinsically rhetorical discourse (Feltovich et al., 1995; Wetlaufer, 1990). They are arguments constructed to persuade readers of a rationale for a legal decision. Indeed, a final discourse component in some cases is one or more dissenting opinions in which judges disagreeing with the majority holding and decision advance different lines of argument from the same or different precedents. Consequently, students' problems with legal case comprehension cannot easily be separated from their difficulties with case reasoning and its essentially rhetorical, intertextual character. It is not just legal language and terminology in cases that students find difficult to understand. It is also the way courts may frame the issues they address; the facts they choose to discuss or put aside; the precedents they choose to consider; and, most important of all, the way they connect or dissociate these components as a reasoned basis for their holdings. From their first days in law school, students are expected to detect problems in courts' rhetorical reasoning as well as to appreciate the usefulness of this reasoning in resolving complex legal disputes.

Do Different Professional Roles Affect Law Students' Problem Detection?

This study differs from Lundeberg's (1987), Deegan's (1995), and Oates's (1997) work by varying students' purposes for reading cases beyond law classroom recitation. The first question to ask, then, is what other roles or tasks for reading would be useful and representative to sample? Hofer (1987) theorized that there are four basic professional roles in which lawyers typically reason when dealing with cases: the philosophic, judicial, advisory, and advocatory (pp. 17–27). In the philosophic role, lawyers reason about the purpose of a law and whether that purpose is ethical; they may ask if a given law has or would have some beneficial or harmful effect, and whether a law should be passed or repealed. In the judicial role, lawyers act like judges, deciding if a law does apply to facts in a specific case. In the advisory role, lawyers are called on to predict what may happen in an undecided case (e.g., suggesting whether an appeal is worth the risk or has much of a chance). Finally, in the advocatory role, lawyers plan and deliver arguments in court on behalf of a client. Using questionnaire data, Hofer found that law students could recognize fundamental differences between these roles, but he did not gather any evidence comparing how students might reason when actually situated in each of these roles. Indeed, although there has been much theorizing about the effect of these roles on lawyers' reasoning, there is little empirical research.

This study uses Hofer's (1987) role definitions as a basis for three of the four tasks assigned to law student case readers. Specifically, this study focuses on purposes for case reading that correspond directly to the philosophic, advisory, and

advocatory roles mentioned earlier. Because lawyers working in the philosophic role are typically formulating and evaluating legal and regulatory policies, this role has been retitled the *policy role* for use in this study. A fourth purpose, to read to prepare for a law classroom recitation, was also used (i.e., to partially replicate the tasks used in the Lundeberg, 1987, and Oates, 1997, studies). It is important to note that although the class recitation role is similar to the task that Lundeberg gave to her student participants, it is not identical. A salient difference is that the role instructions in this study do not ask readers to "teach" other students. Also in this study, there is no demand to memorize information for later recall. The instructions used for each of these four roles are as follows.

Advocatory role.   You will shortly be asked to read three legal cases, all of which address the conditions under which a Pennsylvania appellate court may refuse to hear (that is, "quash") a party's appeal …. Your purpose for reading these cases is as follows … you are to prepare a written argument on behalf of Mr. Mackey (the defendant) in Case 1, that is, as Mr. Mackey's lawyer. Specifically, you must plan an argument appealing the Allegheny Court of Common Pleas decision to refuse to hear (that is, to "quash") Mr. Mackey's appeal.

Advisory role.   A senior partner in your law firm (in Pennsylvania) informs you that she has a client, Baker, who has just won a protracted and difficult arbitration proceeding in which the total recovery was $8,970. Following this result, your partner charged the losing party in the proceeding, Jones, $126 for record costs. Jones, however, wished to appeal the adverse decision to a regular court. Accordingly, to perfect the appeal, he sent a check for the record costs by overnight express to your partner. However, although the check was physically picked up by the overnight carrier almost 2 days before the statutory deadline for paying such costs, it arrived a day and a half late, because the overnight truck was involved in a serious accident in a blizzard. Indeed, when Jones had mailed the check, the overnight service said they would not guarantee on-time delivery, due to the extreme nature of the blizzard already in progress. Your partner wishes to know if she may successfully quash Jones' appeal for failure to pay the record costs by the statutory deadline. She asks that you evaluate her client's prospects in this case in a memo, which you are to write after reading the three cases.

Policy role.   Your purpose for reading these cases is as follows. After reading these three cases, you are to prepare a memo making one of two possible recommendations: 1) that the statute being applied in the cases should be revised, and indicating how and why; *or,* 2) that the statute should not be revised, and why. Specifically, assume you will present your written memo containing your recommendations to the Pennsylvania legislature, for their consideration.

Class recitation role.   Your purpose for reading these cases is as follows. After reading these three cases, you will be asked to explain the significance of these cases as you might be required to do in a law classroom. Just as your professor and school peers might, the researcher will ask you a variety of questions. Specifically, your professor and peers will ask you about the possible legal implications of these cases, and the nature of the reasoning applied in them. You will be allowed to refer freely to the cases as you present your explanations.

Along with examining different roles for reading and reasoning, this study differs from the approach taken in the studies reviewed earlier in two other ways. First, previous studies have not attempted to pre-experimentally identify problematic rhetorical features in their stimulus case texts. For example, the reasoning presented in the ICC case earlier might contain the following problems: missing or incomplete legal premises (e.g., Why does the court extend its definition to "fowl" and not limit its holding to chickens?), failure to mention or discuss certain case facts (e.g., The court does not mention if the eviscerated chickens were frozen or cooked), and indeterminacies of meaning (What is a manufactured product?). As illustrated later, this study targets these kinds of problems in rhetorical reasoning. Second, the previous studies have not examined how law students read and analyze multiple related cases dealing with the same legal question, that is, cases that directly or indirectly comment on each other as (potential) precedents. In their professional practice, however, lawyers must often read large sets of such issue-related cases to complete a specific legal task. In this more expansive intertextual situation, the set of potential problems to be detected in rhetorical reasoning obviously increases.

Recent analyses of such multiple document situations by Britt, Perfetti, Sandak, and Rouet (1999) and Perfetti, Rouet, and Britt (1999) proposed a model of what readers' difficulties and representations may look like. This model includes a mental representation of each document, each situation described in these documents, the relations between the documents, and also relations between documents and the readers' situations or roles (Perfetti et al., 1999, p. 119). However, it is important to note that this model is derived from observation of expert and novice historians reading historical documents. The sets of documents readers examined in this line of research juxtapose competing descriptions and explanations of the same events. Related legal cases, in contrast, present a quite different discursive situation, because cases analyze different events and interpret them in light of the same statutory texts (rules). Nevertheless, the pre-experimental rhetorical analysis conducted for this study applies the Britt et al. model by focusing problems that students might be expected to detect both within and arising between three issue-related legal cases. As shown in Table 1, problems in individual case and cross-case rhetorical reasoning can be grouped according to the canonical rhetorical part of the case from which they arise. The think-aloud protocols in this study were examined to see if students detect pre-identified problems at both levels.

TABLE 1
Levels of Problems in Rhetorical Reasoning Within Individual Cases and
Between Multiple Cases

Canonical Rhetorical Parts of Each Case	Individual Case Level: Problems Arising Within Single Cases	Cross-Case Level: Problems Arising Between Multiple Cases
Issue		
Facts		
Rule		
Jurisdiction and authority		
Use of precedent, reasoning and holding		
Policy		
Dissent (if any)		

RESEARCH QUESTIONS

Given the four different roles for legal case reading and reasoning shown earlier, this study is concerned with addressing several questions: (a) Which of these roles (if any) would lead students to read cases more critically and thus detect more problems overall?; (b) Which of these roles, if any, would lead students to detect more problems at the cross-case level?; and (c) Across all four roles, what kinds of problems are students most likely to detect? Each of these questions is further discussed in turn.

For the first, a plausible expectation is that students in the three professional roles would perform better at detecting problems overall than students in the class recitation role. There are three reasons for this expectation. First, we should have this expectation based simply on the relatively greater complexity and greater task demands associated with the professional roles. In particular, the class recitation role does not ask for students to contemplate any writing or planning for writing. *Read-to-write* tasks have frequently been associated with deeper levels of text processing than tasks not requiring written text production (Wiley & Voss, 1996). Second, research investigating read-to-write tasks suggests that students given argument writing tasks produce texts with the greatest transformation of information and also perform better on text inference and analogy tasks (Wiley & Voss, 1999). Third, the audience invoked by the recitation role is not one that is as dependent on the student for expertise and interpretation as the audiences invoked by the other professional roles (i.e., a court, a legislature, and a law partner). The social concreteness or abstractness, nearness, or distance of perceived audiences has been shown to be an important factor in read-to-write tasks (Rubin, 1984). Therefore, the academic role may simply invite students to surface and paraphrase only the most salient points in the cases, because the primary recipient of the students' recitation is a person presumed to be already familiar with the cases (Fajans & Falk,

1993). In contrast, the other three roles implicitly call for closer evaluation of information across canonical case parts, because the audience cannot be presumed to be as familiar with them. Alternatively, this expectation that students will perform better at detecting problems in these professional roles may be amiss if, in fact, students lack experience with these roles such that they cannot adapt their reading process in light of them.

In addition, we may also expect that students assigned to the three professional roles will not perform equally well. Therefore, we should probably expect students in the advocatory and advising roles to perform somewhat better than students in the policy role. One reason for this conjecture is that the audience invoked by the policy role scenario (a state legislature), although still dependent on the reader's understanding and evaluation of the cases, may be perceived as more distant, less immediate than the smaller audiences invoked by these two other roles. Indeed, if students in the policy role determine early in their reading that the statute in question is acceptable or serves acceptable goals, they may have less motivation to surface other reasoning and rhetorical problems apparent within the cases. On the other hand, we might expect students in the policy role to detect more of the pre-identified policy problems arising from the cases than students assigned to the other task roles.

To address the second question concerning detection of cross-case problems, our expectations should probably parallel those mentioned earlier, and for the same basic reasons. In particular, we should expect readers in the professional roles to perform better. We should also expect that students in these roles would engage in more intertextual case reading than students in the class recitation role, that is, switching while reading one case to read part of another, then switching back. Such an expectation, at least, is generally in line with the theoretical framework for multiple document representations proposed by Britt et al. (1999). Intertextual case reading, in particular, implies control of metacognitive processes that go beyond those explored in earlier studies of legal case reading. This control may be stimulated by the more dependent audience evoked by the professional tasks. Similarly, we should also expect students in the advocatory and advisory roles to detect more cross-case problems than students in the policy role, because of the reduced immediacy of the audience invoked by the latter role.

Finally, as to the third question (What kinds of problems within and between the cases are students most likely to detect?), the extant empirical research concerning students' case reading process is too undeveloped to provide any sort of clear expectation (Bryden, 1984). The question is well worth asking, however, because the range of tasks focused may provide some realism concerning teacher expectations about problems first-year law students can (and cannot) readily detect.

To put these experimental expectations into richer perspective, a synopsis of the three cases used in this study is presented. Following this synopsis, I illustrate the two levels of problem detection occurring at the individual and cross-case

(intertextual) levels of these cases (as outlined in Table 1). These illustrations briefly discuss sample items from the protocol scoring tools.[1]

Synopses of the Three Cases Used

All three cases used are Pennsylvania appellate court cases and each involves parties who previously lost an arbitration decision, resulting in a money judgment against one of the parties. For instance, a homeowner may enter into arbitration with a flooring company whom she feels overcharged her for a new kitchen floor in her home. The arbitrator listens to each party's attorney, then issues a judgment. If they wish, losing parties in arbitration may then appeal the arbitrator's decision to a regular court, but only if they meet certain conditions. To appeal arbitration decisions to a regular court in Pennsylvania, losing parties are required by an 1836 rule to first pay any record costs they owe to opposing counsel within 20 days of the decision. In each of the three cases used in this study, the losing parties failed to meet this prerequisite either in part or whole, with the result that in two of the three cases (*Mackey,* 1992 [a hypothetical case], and *Black and Brown,* 1972) these parties' requests to appeal were *quashed* (denied). In the third case (*Meta,* 1975), the losing party was allowed to proceed with an appeal despite failure to completely satisfy the rule.[2]

Two of the cases are actual appellate cases (*Meta,* 1975, and *Black and Brown,* 1972), whereas the third (*Mackey,* 1992) is a hypothetical case carefully written in the same format and style as the other two, and also presented as a Pennsylvania case. As described later, the *Mackey* case was deliberately constructed to contain incomplete and somewhat incoherent reasoning from precedent, presenting a subtly skewed application of the earlier *Meta* and *Black and Brown* cases to its facts. However, unless readers read intertextually, they may not detect this problem. Together, all three cases invite readers to compare them for the treatment of a recurring issue: How strictly should the procedural requirement to pay opposing counsels' costs be interpreted and applied? In dealing with this issue, the cases require students to consider "slippery slope" arguments about what degree of compliance with procedural statutes is acceptable or unacceptable. Therefore, the cases were also chosen to provide typical instances of appellate court cases in which "literal" versus "activist" views of statutory construction are aired. We need to look further

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[1]The complete scoring tools are available from James F. Stratman on request. Their length prohibited inclusion with this article.

[2]The *Meta* (1975) opinion was fairly lengthy; the court included a detailed and somewhat laborious history of the application of the 1836 appeal prepayment requirement. Therefore, a few of the least relevant paragraphs in the middle portion of this history were deleted. These reductions were made to provide students with an amount of text, which although substantial, could be comfortably read within 90 min. Pilot testing with both novices and professional attorneys confirmed this expectation.

at the details of these cases and their discursive relations to each other to see how this is so.

In the earliest of the three cases, *Meta v. Yellow Cab* (1975), the defendant (Yellow Cab) lost an arbitration decision and sought to appeal it. However, Yellow Cab paid an insufficient amount ($10) of the record costs that were due to the opposing attorney ($17.75), thus short by a mere $7.75. Yellow Cab did pay the $10 by the statutory deadline (within 20 days of the arbitration decision). The court in this case decided that a $7.75 shortfall was too minimal an amount to worry about, and therefore should not prevent Yellow Cab from making an appeal. In coming to this decision, however, the court reviewed a long line of earlier cases, trying to show in them an evolution toward a more liberal, less rigid view of the prepayment requirement. Up to this point, a few courts had been willing to allow defendants to pay less than they owed; no previous court had allowed a defendant to miss the 20-day deadline for payment by any degree. In contrast with this history, the *Meta* court in its holding appears to wholly vacate the statute. The court says losing parties in arbitration decisions need not prepay opposing counsels' record costs to appeal, thus breaking strongly with precedent. They base their position on arguments that the statute is hypertechincal, puts form before justice, and that it serves no real purpose. However, the *Meta* case includes a strong dissenting opinion by the minority, who argue that the majority judges never demonstrated the unreasonableness of the record cost statute and thus have no foundation for simply vacating it.

The second case is *Black and Brown, Inc. v. Home for the Accepted, Inc.* (1972). This case involves a defendant (Home for the Accepted, Inc.) who, after losing in arbitration, simply failed to pay any of opposing counsels' record costs by the statutory deadline (Home attempted to pay weeks late). As a result, Home's appeal was quashed. Home unsuccessfully argued directly from the *Meta* (1975) case that the record cost requirement is, in the *Meta* court's language, a "directory rather than mandatory" requirement (p. 902). In response to this argument, the *Black and Brown* court revisits the reasoning in *Meta* and explicitly overrules the *Meta* decision, evolving along the way a yet more complicated interpretation of the 1836 statute and the line of previous cases dealing with it. This court's holding says, "a valid attempt to make … timely and full payment, coupled with substantial though incomplete compliance with the requirement should not result in the harsh finality of an order quashing an appeal from arbitration" (p. 724). Notably, both the *Meta* and *Black and Brown* decisions are Superior Court decisions, but the later court in *Black and Brown* does have the power to overrule the earlier decision.

Finally, the hypothetical *Mackey* (1992) was presented as a Court of Common Pleas case, and thus was heard in a court with less authority than these other two. Like the other defendants, Mr. Mackey, who previously lost an arbitration decision sought to appeal it. The facts show that Mr. Mackey did attempt to pay opposing counsel. However, Mr. Mackey paid less than he should have, and claimed to have misread the amount he owed to Mr. Pepper's (plaintiff's) counsel. Mr. Mackey was

supposed to pay $327, information communicated to him in a handwritten note, which Mr. Mackey further claimed was in pencil and hard to read. Mr. Mackey also complained of other difficulties getting clear communication from opposing counsel and from the court Prothonotary's office concerning the precise payment deadline. The facts indicate that he not only paid $90 less than he should (he paid only $237), but that he also missed the 20-day payment deadline by 2 days. The Court of Common Pleas found against Mr. Mackey and quashed his request to appeal. The court stated that Mr. Mackey made neither a valid nor honest attempt to satisfy the prepayment requirement.

As noted earlier, this court's reasoning incoherently cites each of the two earlier cases on two important points. First, the court appears to cite *Meta* (1975) for the principle that a defendant must make an "honest attempt" to meet the requirement. However, the only direct quotation that the court uses from *Meta* says nothing about honesty or what makes an attempt to meet the prepayment requirement honest. Second, the *Mackey* (1992) court cites *Black and Brown* (1972), the controlling precedent, for the principle that a defendant must demonstrate a "valid attempt to make … full payment" (p. 724) to be allowed to appeal. However, in quashing Mr. Mackey's appeal, the court does not say why Mr. Mackey's late, partial payment should be considered invalid or dishonest. Further, the quote that the *Mackey* court uses from *Black and Brown,* although accurate, is incomplete and stripped from its context. In fact, the court in *Black and Brown* explicitly encourages courts to examine the honesty of defendants' attempts to pay record costs before approving a motion to quash.

Given this synopsis of the cases used, I illustrate the kinds of problems in rhetorical reasoning that were pre-experimentally identified at the individual and cross-case (intertextual) levels.

Problems at the Individual Case Level

At the individual case level, I identify potentially problematic rhetorical relations arising either within or between the canonical parts of each case, that is, considered by itself. These parts are shown in the left column of Table 1. Therefore, at this level we look at how the issue, facts, rule, jurisdiction, interpretation of precedents, reasoning, and holding cohere within a case. We also look at problems involved in each of these parts separately. To illustrate, consider the following problems within the *Mackey* (1992) case.

Fact problems.   Depending on the problem a lawyer is trying to solve, there are often many facts that lawyers need or wish to know that cases do not provide. Therefore, fact problems concern missing information about a party's circumstances or actions. Two questions we might expect some readers to raise were these: (a) Did Mackey have counsel, or was he acting as his own counsel?; (b) If

Mackey had counsel, why did Mackey's counsel not attempt to learn directly the correct amount of record costs owed—or *did* Mackey's counsel try and also fail? Answers to these questions are not apparent in the case, but they are important ones to ask because Mr. Mackey lost his appeal.

Issue problems.   When courts write their opinion in a case, they state near the beginning the legal issue they see themselves addressing. This statement of the issue may differ in subtle, but telling, ways from the way the litigants presented the issue to the court earlier in their written briefs (Stratman, 1994). The court's statement of the issue is often a key to how that court sees the law and the facts it is called on to interpret. For example, one question we might expect readers in this study to raise is the following: Why does the *Mackey* (1992) court state that the issue is whether an appeal may be quashed for nonpayment, when the facts show that Mackey partially paid the amount owed, albeit 2 days late? In this example of a rhetorical problem, the court's statement of the issue does not completely jibe with the facts in the case.

Holding and reasoning problems.   In law school recitation, students are commonly challenged to criticize or second guess courts' reasoning and interpretation from the facts in the case to the court's conclusion (in the holding). Holding and reasoning problems are those in which courts seem to ignore certain facts or to characterize facts in disputable ways. For example, one question we might expect readers to raise about the holding and reasoning in the *Mackey* (1992) case is the following: If the evidence of Mr. Mackey's fax and phone calls was presented in court, why did the court apparently discount this evidence when concluding that Mr. Mackey did not make "a valid attempt to make … full payment?" In other words, if Mr. Mackey's attempts do not constitute valid attempts, then what attempts would?

As can be seen, each sample item mentioned earlier points to a potentially problematic aspect of the decisional rhetoric presented in the *Mackey* (1992) opinion. Similar kinds of problems were identified within the canonical parts in each of the other two cases used in the study (*Meta,* 1975, and *Black and Brown,* 1972).

Problems at the Cross-Case Level

The individual analysis of the cases for problems that law students should notice was extended by also analyzing the larger, and intricate, rhetorical space formed between these cases. At this cross-case level we identify legal meaning, reasoning, and interpretation problems that may contribute to intercase inconsistency or ambiguity in interpreting and applying the law. Consider the following examples.

Fact problem.   Does the reader ask if each of the defendants in *Mackey* (1992) and *Meta* (1975) might strike a court as satisfying the test set forth in *Black and Brown* (1972)—namely, that these defendants, although in different ways, arguably display "valid attempt(s) … coupled with substantial though incomplete compliance?" (*Black and Brown, Inc. v. Home for the Accepted, Inc.*, 1972).

Holding and reasoning problem.   Does the reader ask whether the *Black and Brown* (1972) court's statements about the *Meta* (1975) decision (which the *Black and Brown* court overruled) are consistent with what the *Meta* court itself says in its holding?

These two sample cross-case items point to potential problems arising from comparisons of the reasoning in the three cases, comparisons necessary to understand the relations of the cases to each other and to the evolution of courts' thinking about the prepayment statute. The first item points to a decision consistency issue arising from a factual comparison of the three cases: If *Black and Brown* (1972) is now the controlling case, then it appears that both Yellow Cab and Mr. Mackey should have been allowed to make their appeals. That is, a plausible argument could be made that the facts of both cases fit within the *Black and Brown* holding. As seen earlier, however, Mr. Mackey's appeal was quashed. The second item also points to a potential problem in the relation between the *Black and Brown* and *Meta* (1975) decision: *Black and Brown* clearly rejects the conclusion (holding) of *Meta,* but it is much less clear that *Black and Brown* rejects all of the reasoning that *Meta* presented to justify this conclusion.

METHOD

Law Student Recruitment and Assignment

Fifty-six volunteer law student participants (29 men, 27 women) were recruited from two major law schools in the western United States, allowing 14 to be placed in each of the four task conditions described earlier. All participants were in their second semester of law school, and all were concurrently enrolled in a course in appellate court rules and procedure. Students were assigned to task groups on a rotating basis, with the very first student assigned (randomly) to the advisory condition, with each subsequent volunteer assigned to the advocatory, policy, and class recitation task conditions in turn. This assignment sequence was altered only when it was necessary to try to equalize groups for the male–female proportion. As a check on assignment bias resulting from this procedure, the most recent Law School Admission Test (LSAT) scores of each participant were obtained (after assignment), and group LSAT means were compared. Mean LSAT score was 160.5, and the range was 176–146. No statistically significant between-group differences

on LSAT were found: $F(3, 52) = .98$, $p = .4$ (advocatory, $M = 161$; advisory, $M = 160$; policy, $M = 162$; class recitation, $M = 158.5$). Participants' mean age was 25.3, and the range was 22–47 (advocatory, $M = 25$; advisory, $M = 26$; policy, $M = 25$; class recitation, $M = 24$).[3]

Think-Aloud Instructions Common To All Four Tasks

All participants were first given a read-aloud, think-aloud practice task using unrelated reading material (an appellate judicial opinion concerning censorship). In addition, all participants were required to read the experimental directions aloud and to say aloud whatever they were thinking as they did so (Ericsson, 1988; Ericsson & Simon, 1994). These readings were tape recorded to capture participants' initial reaction to the tasks and any questions about the directions they had. Students were allowed up to 90 min, at which point they were stopped. Think-aloud instructions used in each of the four conditions were the same, as follows:

> To help us understand your reading and thinking process, we ask that you please read all of the cases out loud. And, as you read the cases, say out loud everything that you happen to be thinking about as you proceed; if you need to reread, no matter how often, continue reading aloud and thinking aloud. Interrupt your reading of the cases to make comments about them whenever and as often as you feel natural or necessary, but try not to fall silent … . You may read the cases and their parts in any order you choose. Therefore, you may begin your reading with any of the three, and may skip between them whenever and as often as you like … . Feel free to take notes on the cases themselves or on a notepad; if you like, you may also use a highlighter pen. Whenever you write anything—no matter how little—be sure to say aloud what you are writing. If at any point you decide to reread your notes, please read them aloud also.

Three of the four task conditions called for students to produce written products based on their readings: either a written argument, a memo to a law partner assessing chances for successful litigation, or a memo to a state legislature regarding possible changes to a statute. In these three conditions, students were additionally informed (orally) that, although it might not be possible for them to write a complete memo or argument in the 90 min they were allowed, they were to proceed as far toward those goals as possible, doing whatever they would normally do. It is important to note that any think-aloud comments that students made after starting to write (or outline) their briefs and memos were excluded from the data analysis, as were drafts that they may have begun to produce. However, any notes students

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[3]One participant in the class recitation group declined to provide an age.

made while reading the cases prior to beginning their drafts were included in the data analysis.

All think-aloud data were collected on site at the two schools, in specially re-served rooms. In 51 of the 56 sessions, the researcher left the participant's physical presence and sat in an adjacent room after the foregoing instructions were re-viewed. In the remaining instances, a wholly enclosed room was not available; in-stead, a semiprivate study carrel was used, and the researcher sat out of both ear-shot and eye contact with the participant. Although these arrangements mean the researcher cannot prompt the participant to think aloud if the participant falls si-lent, the countervailing advantage is that the participant feels less self-conscious and the risk of participant–researcher reactivity artifacts is reduced. Otherwise, all participants signed consent forms assuring them that their data was confidential and that it had no bearing on their law school grades or evaluation.[4] The research-ers collecting the data were not employees or students at either law school and knew none of the participants. When students completed their sessions, they re-sponded to a brief questionnaire, were debriefed, and paid $20.

Scoring of Think Alouds

The scoring tools produced for the two levels of analysis described earlier are quite detailed. The analysis was accomplished through a combination of my own read-ings of the cases with the readings of eight students and three lawyers (including an appellate attorney with 14 years experience) whose readings were all taped in a se-ries of think-aloud pilot studies (Deegan, Stratman, & Rideout, 1994).[5] Based on these, two protocol coding schemes were prepared. For the advocatory, class reci-tation, and policy tasks the same coding scheme was used. This scheme identified a total of 109 problematic features within and between the cases that student readers might be expected to notice. These problematic features were initially divided into three groups corresponding to the three cases (*Mackey,* 1992, *Meta,* 1975, and *Black and Brown,* 1972). Then, within each case problematic features were further subdivided according to whether the feature concerned case facts, case issue, case jurisdiction, case holding and reasoning, policy, or dissent. To code protocols from the advisory task, the same 109 items were included, and 24 more items were added to reflect the inclusion of the hypothetical case (*Baker v. Jones*) within the instructions for this task. Therefore, this scheme contained 133 items in all. Nota-

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[4]A human research approval form is on file and obtainable from James F. Stratman or from the Of-fice of Research Administration, University of Colorado at Denver.

[5]No argument will be made that the scoring tool resulting from this analysis is exhaustive or con-tains all of the interpretative problems a reader might notice; it most assuredly does not. However, this study attempts a more formal analysis for problems in rhetorical reasoning than has been attempted in previous studies of legal case reading.

bly, because of the added items, the advisory group cannot be statistically compared to the other three groups in terms of overall scores, but it can be compared on both the core and cross-case schemes described next.

Given the size of these base schemes, rank ordering their items was not attempted (i.e., either according to the likelihood that students would detect them or according to their relative importance to a given task scenario). Instead, as a first approximation to such a comprehensive ranking, a subscheme of 33 items were considered *core* problems. This core subscheme was composed of items selected from the 109 item base scheme. Core problems were problems that we might plausibly expect all student readers of the cases to raise in their think alouds, regardless of the task role for which they were reading. This selection of items reflects the readings of students and lawyers collected in the pilot studies, as well as my own. Among these are items like the following: "Does the reader ask what is the relation of the Court of Common Pleas to other state courts (e.g., Superior Court)—is it more or less authoritative, higher versus lower jurisdiction?"; "Does the reader ask about/what is the standard of review in cases like these?"; and so on.

Similarly, a subscheme of 40 cross-case scoring items was prepared. Nine of these cross-case items were also considered to be, and thus included in, the core items just discussed. Cross-case items specifically identified problematic relations among two or more of the three cases that students read. Therefore, on this subscheme the advisory group can also be compared with the other three groups. In part, this scheme was designed to help assess two related things: (a) how intertextually and comparatively students might read the cases, and (b) how sensitive students are to gaps and connections in the reasoning between the three cases.

The reliability of the largest, most inclusive coding scheme (i.e., that used for students in the evaluative advisory task condition, with 133 items) was assessed using three independent raters on a randomly chosen protocol transcript from among those produced in this task condition. All readers' think-aloud comments were broken into clause length units and numbered. Raters included a professional paralegal concurrently enrolled in a master's degree program in technical communication; a practicing lawyer concurrently employed as a law school instructor; and another graduate student enrolled in a master's degree program in technical communication. The graduate students were previously exposed to the cases used in a graduate-level course in legal reasoning and writing. Prior to the reliability test, all raters were trained in the use of the scoring tools with transcripts collected during the pilot study. Raters were instructed to code the selected test protocol (which contained 132 total comments) for the presence or absence of each item in the scheme, and to provide a specific reference to the clause numbers in the transcript for detected items. The mean interrater (pairwise) reliability was quite high at 93.7%. A combined Cohen's kappa test for each pair of raters was significant, $\kappa = 1.29$, $SE = .36$, $p < .001$.

RESULTS

The results for the overall, core, and cross-case problem detections are shown in Table 2. On the overall measure, the advocatory, policy, and class recitation task students averaged about 13 detections, or 11.8% of the 109 total items ($Mdn = 14$, $SD = 6.22$). As noted, the advisory group cannot be statistically compared to the other three groups on the overall measure because the overall scoring tool for this group contained 24 more items dealing with the *Baker v. Jones* hypothetical that was part of this group's task directions. Like the other three groups, however, this group on average also detected a relatively small number of problems: 16.2, or 12.2% of the 133 total items ($Mdn = 13$, $SD = 8.96$). Although at first impression these means may appear low, in fact there is no case reading study data available to support a judgment that these students performed poorly. As discussed further later, there may be several explanations for these detection rates.

Comparison of Overall Problem Detections

More to the point, significant differences on the overall measure were found using one-way analyses of variance (ANOVA) between the advocatory, policy, and class recitation groups: $F(2, 39) = 7.32$, $p = .002$. In particular, two conjectures about the effect of different task roles on problem detection were supported. First, in terms of overall detections, both the advocatory ($M = 14.4\%$, $t[26] = 3.16$, $p < .01$) and policy ($M = 13.4\%$, $t[26] = 3.77$, $p < .001$) task groups performed significantly better than the class recitation group ($M = 7.7\%$). Second, it also appears that the advisory group ($M = 12.2\%$) performed better than the class recitation group, although again, their performances cannot be statistically compared on overall score. Two results here, however, were contrary to expectation. First, the advocatory group did not score significantly better overall than the policy group, $t(26) = .49$, $p = .62$. Second, it was con-

TABLE 2
Comparison of Mean Overall, Core, and Cross-Case Problem Detections
Across Task Roles

Detection	Advocatory	Advisory	Policy	Class Recitation	All
Overall	14.4% (15.70)**	12.2% (16.20)[a]	13.4% (14.60)**	7.7% (8.40)	11.8% (12.9)[b]
Core	18.4% (6.00)**	16% (5.30)**	14.3% (4.70)	8.9% (2.90)	14% (4.7)
Cross-Case	17% (6.71)*	10.7% (4.29)	9.6% (3.86)	8.4% (3.36)	11.4 % (4.5)

Note. All t-tests were two tailed.

[a]The mean Overall Detections in the Advisory task cannot be directly compared to the other task means because the schedule for the Advisory task contained 24 additional items. [b]Mean score for Advocatory, Policy, and Class Recitation groups only.

*Significant at the $p < .05$ level. ** Significant at the $p < .01$ level.

jectured that the policy group would identify more policy-related problems ($N = 5$) than the other groups. Although the mean detection rate for the policy-related items was higher for this group than any of the other three groups (policy, $M = 33\%$; advocatory, $M = 10\%$; advisory, $M = 5.7\%$; class recitation, $M = 3.5\%$), the between-group differences were not statistically significant. Finally, Pearson correlations (r) with LSAT were computed for each cell; these ranged from .16 for the policy group to .40 for the advisory group, with a mean of .32. There were no significant differences between group LSAT correlations on the overall measure.

Comparison of Core Problem Detections

Mean scores for the 33 core problems, that is, problems that were conjectured to be critical to all of the case readings regardless of task role, are also shown in Table 2. All four groups detected on average 4.7 of these problems, or 14% ($Mdn = 4$, $SD = 2.9$). To put this seemingly low mean in perspective, however, it should be noted that 31 of these 33 core problems (94%) were detected by at least one student, providing some support for the idea that these problems were indeed core problems. When all four task groups are compared with one-way ANOVAs, significant between-group differences are again found, $F(3, 52) = 3.38$, $p = .02$. The advocatory group performed significantly better than the class recitation group: advocatory ($M = 18.4\%$) versus class recitation ($M = 8.9\%$), $t(26) = 2.88$, $p < .001$. The advisory group ($M = 16\%$) also performed significantly better than the class recitation group ($M = 8.9\%$) on core items, $t(26) = 2.79$, $p < .01$. At the same time, several results on this measure were contrary to expectation. First, the advocatory group did not perform significantly better than the policy group, $t(26) = 1.14$, $p = .26$. Second, the policy group ($M = 14.3\%$) did not perform better than the class recitation group ($M = 8.9\%$), but the difference fell just short of statistical significance, $t(26) = 1.95$, $p = .06$. Third, the advisory group did not perform significantly better than the policy group, $t(26) = .59$, $p = .55$. Finally, Pearson correlations (r) with LSAT were computed for each cell; these ranged from .17 for the class recitation group to .36 for the advisory group, with a mean of .27. For the core detection measure, there were no significant differences between LSAT correlations.

Comparison of Cross-Case Problem Detections

A different pattern appears in the data for the 40 cross-case scoring items. As Table 2 shows, all groups detected on average 4.5 of these problems, or about 11% ($Mdn = 4$, $SD = 3.2$). Of the 40 cross-case problems in the scoring tool, 10 (25%) were not detected at all, and 7 (17%) were detected by one student each. Therefore, relative to core problems mentioned earlier, cross-case problems as a class were considerably more difficult for students to detect. When all four task groups are compared with one-way ANOVAs, again significant group differences are found for these detec-

tions, $F(3, 52) = 3.49$, $p = .02$. The advocatory group ($M = 17\%$) performed significantly better than the class recitation group ($M = 8.4\%$), $t(26) = 2.75$, $p = .01$; and also performed significantly better than the policy group ($M = 9.6\%$), $t(26) = 2.49$, $p = .02$. However, there were also several results contrary to expectation. The advisory group ($M = 10.7\%$) did not perform better than the class recitation group, $t(26) = .84$, $p = .41$; or better than the policy group, $t(26) = .42$, $p = .68$. Also, the policy group did not perform significantly better than the class recitation group, $t(26) = .51$, $p = .6$. Finally, Pearson correlations (r) with LSAT were computed for each cell; these ranged from $-.04$ for the class recitation group to $.61$ for the advisory group, with a mean of $.30$. The advisory group correlation was statistically significant ($p < .001$).

Linear Versus Intertextual Reading and Case Order Effects

A corollary of the conjecture that the groups assigned professional roles would perform better than the class recitation groups on the cross-case items is the expectation that the former groups would engage in more intertextual reading of the cases, that is, pausing before finishing one case to switch to read another case or to revisit the directions to reconnect with the original task context. For example, a reader trying to relate a holding in one case to a holding in another case might engage in such behavior. Although the cross-case detection data provided earlier provides one measure of this behavior, the protocols were also conservatively tabulated for the reading pattern exhibited. As the data in Table 3 show, when all four task groups are combined, the number of intertextual versus linear readers is nearly equal (26 linear, 30 intertextual). Although none of the between-group differences are statistically significant using a chi-square test, all differences are in the expected direction. Specifically, when the two reading patterns are compared, each of the three real-world task groups had more intertextual readers than the class recitation group. Moreover, intertextual readers in the advocatory condition outnumber the linear readers by the same proportion that the linear readers outnumber the intertextual readers in the class recitation condition.

More strikingly, as Table 3 also shows, the intertextual readers performed significantly better on all three of the problem detection measures than the linear readers did. First, on the overall detection score, intertextual readers scored significantly better than linear readers: $M = 15.9$ versus $M = 10.9$, $t(39) = 2.02$, $p < .016$. Second, on the core detection score, intertextual readers scored significantly better than the linear readers: $M = 5.97$ versus $M = 3.35$, $t(54) = 2.00$, $p < .001$. Finally, on the cross-case detection score, intertextual readers again scored significantly better: $M = 5.87$ versus $M = 3.12$, $t(54) = 2.00$, $p < .001$.

Another factor conceivably related to students' problem detection besides intertextual reading and task type is the basic sequence in which they chose to read the three cases. In the packets presented to students, all cases were in the same (de-

fault) order: *Mackey* (1992), *Meta* (1975), then *Black and Brown* (1972). This also happens to be the order from the least to most authoritative case. However, task instructions explicitly told students they could read the cases in any order they liked. Default sequence readers constituted the largest group (75%), followed by chronological sequence readers (21%). These results could reflect that some students simply forgot that they could read the cases in any order rather than reflect a deliberate strategic choice. However, the default order is probably the optimal order for advocatory readers, because they would want to read *Mackey* first to learn about their client's situation before moving to the other cases. Among these readers, 71% read the cases in the default order. In addition, the greatest percentage of chronological sequence readers was found in the advisory group (46%), who had the most complex task. These readers may have felt that getting a sense of the evolution of the applicable law was an important subgoal for evaluating the partner's chances in litigation. A similar evolving picture of the law would also seem important for policy readers, but only 15% of these readers read the cases in chronological order. Class recitation readers had the largest percentage of default readers (93%). Notably, between default and chronological readers there were no significant differences on any of the three problem detection measures. Therefore, case reading sequence does not appear related to variation in problem detection rates.

Most Frequently Detected Problems

Finally, across all tasks, what kinds of problems are most salient to students and detected most often? To begin to answer this question, it is useful to examine sepa-

TABLE 3
Number of Students, Mean Detection Scores for Students Showing Linear and Intertextual Case Reading Patterns

Reader	Advocatory n = 14	Advisory n = 14	Policy n = 14	Class Recitation n = 14	Total N = 56
Linear	29% (4)	43% (6)	43% (6)	71% (10)	46% (26)
Overall mean score					$M = 10.90$
Core item mean score					$M = 3.35$
Cross case mean score					$M = 3.12$
Intertextual	71% (10)	57% (8)	57% (8)	29% (4)	54% (30)
Overall *M* score					$M = 15.9$*[a]
Core item *M* score					$M = 5.97$**
Cross case *M* score					$M = 5.87$**

Note. All *t* tests were two tailed.

[a]Degrees of freedom were reduced in this t test to increase stringency, due to large skewness in the scores of the two samples.

*Significant at the $p < .016$ level. **Significant at the $p < .001$ level.

rately students' detection of fact problems (Table 4) and holding and reasoning problems (Table 5). The far right columns in Tables 4 and 5 show in descending order the most frequently detected problems of each type (i.e., problems detected by at least 25% of the students). The interior columns of each table display how many students detected these problems in each task group. Two features of these data are

TABLE 4
Most Frequently Detected Fact Problems Across Groups

	Students Detecting Each Problem (%)				Total
Fact Item in Coding Schedule	Advocatory	Advisory	Policy	Class Recitation	All Groups
(1) What does "prothonotary" mean?	21% (3)	50% (7)	50% (7)	50% (7)	43% (24)
(2) (CC) Does the reader note/comment that, in comparison with the defendant (Home) in *Black and Brown*, Mackey appears to have made a greater effort to meet the record cost requirement, and thus that *Black and Brown* is distinguishable from *Mackey* on the facts?	64% (9)	29% (4)	14% (2)	14% (2)	30% (17)
(3) Is there evidence that the plaintiff (Pepper) accidentally versus deliberately provided the incorrect date, and the sloppy handwritten note, in order to deceive the defendant?	21% (3)	29% (4)	57% (8)	14% (2)	30% (17)
(4) (CC) Does the reader specifically note/comment that, like Mackey, Yellow Cab also wrote to the plaintiff (Meta) to learn the exact amount of record costs owed?	64% (9)	14% (2)	21% (3)	14% (2)	29% (16)
(5) What does "assumpsit" mean?	29% (4)	7% (1)	50% (7)	21% (3)	27% (15)
(6) (CC) Does the reader note/comment that, like Mackey, defendant Yellow Cab also seems to have made an "honest attempt" by paying *part* of what was owed?	36% (5)	21% (3)	14% (2)	36% (5)	27% (15)

Note.   CC = cross case problem.

TABLE 5
Most Frequently Detected Holding and Reasoning Problems
Across Groups

Holding and Reasoning Item in Coding Schedule	Percent of Students Detecting Each Problem (%)				Total
	Advocatory	Advisory	Policy	Class Recitation	All Groups
(1) Does the reader remark that the two *Mackey* holding(s) (i.e., one or both) and their supporting reasoning seem confusing, incoherent, incomplete, or possibly unfair?[a]	50% (7)	50% (7)	100% (14)	29% (4)	57% (32)
(2) (CC) Does the reader ask if/comment that *Black and Brown* agrees with or supports the *Mackey* decision?	79% (11)	50% (7)	50% (7)	50%, (7)	57% (32)
(3) What does de minimis mean?	36% (5)	57% (8)	36% (5)	57% (8)	46% (26)
(4) (CC) Does the reader comment that, while *Black and Brown* overrules *Meta* for erroneously calling the record cost requirement "directory" rather than "mandatory," the reasoning cited in *Black and Brown* seems to be partly (or even largely) in agreement with that in *Meta*?	29% (4)	36% (5)	14% (2)	43% (6)	30% (17)
(5) Wouldn't the fact that Mackey wrote to the plaintiff to determine the amount owed show good faith and honesty, rather than dishonesty?	50% (7)	36% (5)	14% (2)	14% (2)	29% (16)

Note.   CC = cross care problem.
[a]Core problem.

worth noting. First, two of the most frequently detected fact problems were terms students found unfamiliar: *prothonotary* and *assumpsit.* Understanding these terms, although helpful for all four tasks, is nevertheless not a critical problem. However, the remaining problems in Table 4 focus on Mr. Mackey's peculiar fac-tual situation, and three of these are important cross-case problems (Items 2, 4, and 6). The results on these items are encouraging for a couple of reasons. First , they show that student readers were focusing on the planted infelicities in the *Mackey*

(1992) court opinion; moreover, they suggest that students may have recognized these infelicities by viewing *Mackey's* facts in relation to the facts in the *Meta* (1975)and *Black and Brown* (1972) cases. Of the three cases, the *Mackey* case was intended to strike readers as the more problematic decision. Second, two of these items (Items 2 and 4) are detected by a much larger percentage (64%) of advocatory readers than were detected by readers in the other groups. This result is encouraging because the advocatory readers would have the greatest need to dissect the facts in Mr. Mackey's situation and compare these facts with those of the defendants in the other two cases.

The five most frequently detected holding and reasoning problems are shown in Table 5, and encouragingly, three of these five again center on the *Mackey* (1992) decision. Indeed, the most frequently detected problem (57%) across all four groups was the internal incoherence in the *Mackey* opinion's holding in relation to the facts presented in that case. As indicated earlier, this problem was a planted core problem. A part of this planted problem was the *Mackey* court's broad, rhetorically skewed use of *Black and Brown* (1972; Item 2) and in particular this court's characterization of Mr. Mackey as dishonest (Item 5). Over one half of all students mentioned Item 2, whereas 29% mentioned Item 5. As with the most frequent fact problem detections, all groups appear highly sensitive to unfamiliar legal terms. In contrast with the terms prothonotary and assumpsit noted earlier, however, the meaning of the term *de minimis* is a relatively more important problem to recognize, because this term figures closely in the reasoning of all three cases. (Roughly, the term means that a rule, requirement, or infraction is too small to worry about, but readers need to attend carefully to the context in which the term is used.) Finally, the fourth problem in Table 5 is also an important problem. Readers need to be quite careful in concluding just whether, and if so, precisely how, the *Black and Brown* and *Meta* (1975) decisions differ. Thirty percent of all students detected this problem.

As for between-group differences, Table 5 shows some results consistent with expectation and also some anomalies that seem difficult to explain. On the one hand, consistent with expectation, almost 80% of the advocatory group did detect the planted incongruity between the controlling *Black and Brown* (1972) decision and the *Mackey* (1992) decision (Item 2). On the other hand, and contrary to expectation, read-to explain readers perform better than any of the real-world reader groups on the important cross-case (Item 4). Both the advocatory and advisory conditions would need to recognize the potential consistency problem arising between the *Black and Brown* decision and (overruled) *Meta* (1975) decision to properly develop their briefs and memoranda. It is somewhat surprising that class recitation readers, given their more abstract task directions, would detect this problem more than any of the other groups. Finally, and also anomalously, virtually all of the policy readers detected the general problem with the *Mackey* decision (Item 1), whereas only 50% of the advocatory and advisory groups did so.

DISCUSSION

Do Differences in Task Context Affect Readers' Problem Recognition?

Reading researchers have often hypothesized that the task, purpose, or role for which readers read creates a potent context that affects readers' subsequent processes and strategies (e.g., Baillet & Keenan, 1986; Hacker, 1998; Mills et al., 1995; Otero, 1998; Pressley & Afflerbach, 1995, p. 134; Waern, 1988). In this study, the answer to the question as to whether differences in task and role matter is a qualified "yes." When one surveys all of the comparisons in Tables 2 and 3, problem recognition rates for the three real-world roles are consistently better than those for the class recitation task. On the overall detection measure, both the advocatory and policy groups performed significantly better than the class recitation group. On the core item measure, both the advocatory and advisory groups performed significantly better than the class recitation group; scores for the advocatory group are consistently better than those of the other groups on all of the summary measures shown in Table 2. Collectively, these results suggest that the advocatory role is eliciting more productive problem detection than the other tasks. This finding is consistent with previous research showing that students given argument writing tasks produce texts with the greatest transformation of information, and also perform better on text inference and analogy tasks (Wiley & Voss, 1999). Given the detection rates reported earlier, then, it appears reasonable to conclude that task role does influence problem recognition during case reading.

More cautiously, it appears that different legal reasoning roles may be related to the propensity to read cases intertextually versus linearly, with robust concomitant effects on problem detection rates. Such a result is consistent with previous theoretical analyses of readers' processes in multiple document situations (Britt et al., 1999; Perfetti et al., 1999). This propensity may be suggested by the overall pattern of results shown in Table 3. On average, 62% of readers given a real-world task read the cases intertextually, switching from case to case, whereas only 29% of those in the academic class recitation role did so. More compellingly, those who read intertextually performed significantly better on all three problem recognition measures, not just on the cross-case measure, than those who read cases linearly. What remains unclear is whether intertextual switching between cases per se is a cause of greater problem detections. Rather, it seems more likely that readers pause in reading one case and switch to another to address some problem or question that has already occurred to them while reading. Some switches might be precipitated by fairly simple problems (e.g., "I'm just looking back to see, because I forgot the name of the first case I read"), whereas others may occur for more complex, strategic reasons associated with the reader's specific legal reasoning role (e.g., "I want to see if maybe we can use some of the court's policy for this defen-

dant here, so I'm looking back through this other opinion for some of that language"). Switching between cases probably is not a method of detecting problems that is pursued in a proactive sense, but instead a means of addressing (or perhaps further sharpening) the representation of a problem the reader is currently experiencing in working memory.

On the other hand, some of the role groups expected to perform better than others at problem recognition did not. The most curious of these results concern the advisory group. On the cross-case measures, this group's performance did not significantly differ from that of either the class recitation group or the policy group. This outcome is surprising given the greater inherent complexity of the task and role given to this group, including a hypothetical case (*Baker v. Jones*) not provided to other task groups. Similarly, the policy group did not perform better than the class recitation group on either the core or cross-case items. Therefore, it is relevant to ask, "Why did the detection of problems *not* vary between the professional roles and the academic role more than it did?"

There may be at least two explanations. First, many students, having read the particular task scenario they were given, seemed to hold this scenario in abeyance, putting it to one side as something to be considered only later. Their notion seemed to be, first get into the cases, then worry about the task context later—a rather "bottom-up" approach. Weinstein's (1998) findings concerning experts' seemingly efficient top-down approach to legal problem solving notwithstanding, it is not yet clear whether holding the scenario and purpose for one's case reading in abeyance positively or negatively impacts problem detections. A closely related impression one gets from reading and rereading the 56 protocols in this study is that many of these students are often unaware of the consequences of strategic choices they make in what and how they read. For instance, some students voiced that it was important to skim headnotes, but they did so often without expressing a notion as to what they were skimming them for. Others said they never read headnotes, because headnotes were "a waste of time." Also, quite a few students decided to skip relevant portions of the cases entirely, showing the greatest disregard for the important dissent in the *Meta* (1975) case. (One student said, "I just never read the dissents. They're worthless."). The students' protocols do not reflect much awareness of the possible relations between these choices and the goals and constraints imposed by specific tasks, a lack of awareness partly reflected in the case reading sequence data. A few students who simply proceeded through the cases in the default order remarked in their debriefings that, if they were asked to do the task again, they would pay much more attention to which case they chose to read first. As they discovered, the case they chose to read first could lead them to either miss (or exaggerate the importance of) details in the other cases. Such comments, along with the data in Table 3, which shows a strong overall relation between an intertextual reading pattern and higher problem detection scores, perhaps point to the potential benefit of having students make think-aloud protocols of themselves when reading

multiple cases in real-world contexts. The act of inspecting (after the fact) one's own reading decisions may be a robust method for making one more conscious of these decisions and their consequences; or, students might be asked to compare a protocol of their own reading with that of one of their peer's, as a way of surfacing possible effects on problem detection that individual reading process decisions may produce.

A second explanation for disappointing problem detection rates in the advisory and policy groups relative to the class recitation group may also simply be the seeming familiarity of the role and task scenarios themselves. Notably, very few students voiced any difficulty comprehending the scenarios when they were asked about them during debriefing. The scenarios seemed both comprehensible and valid to them. Indeed, because they seemed straightforward, students may have felt that the scenarios were the easier or less essential component to be attended to, and proceeded too quickly to the case reading as the more difficult component.

What Other Factors May Have Affected Readers' Problem Recognition Rates?

There are some other explanations for readers' problem detection rates to consider. One possibility is that, quite simply, for some students both the cases and the scenarios were too complex for them to pursue in the time allowed. In effect, for some of these readers, just forming basic story pictures of the different cases, their actors, and the legal issues (what we might call the individual case representation process) consumes so many cognitive resources that little capacity is left for more critical evaluation and interpretative activity. Like the inexperienced SSD problem solvers in Weinstein's (1998) study, these students may have lacked ready schemas and relevant legal knowledge for the type of cases they were looking at. That is, they may have lacked schemas beyond the generic schema of issue, facts, rule, reasoning, holding, policy, and dicta. Consequently, they may have had to use most of their resources to try to construct other, more problem-relevant schemas while they were reading. In turn, this elemental process of schema construction could make the intertextual switching clearly associated with higher detections scores not only difficult but disruptive.

A second possible explanation lies in precisely the observation that Fajans and Falk (1993) made about their students: Law students feel a strong pressure from the experience of sitting in first-year classrooms to be able to paraphrase the canonical components of each case for purposes of recitation. Many students, regardless of their assigned role, took notes toward this end, with a minority using the controversial color-highlighting method of case briefing (e.g., red for the facts, blue for the issue, green for the holding, etc.). The impression one has of these particular protocols is that students were indeed exerting much effort to be sure they were properly identifying case parts. Although this method certainly has the poten-

tial benefit of turning students' attention toward problems arising among individual case parts, its very discreteness may lead students to feel the "hard work" of analysis is done once the parts are identified. At the same time, this method may reflect a "restricted perspective bias," which Feltovich et al. (1995) described as appearing when students confront complex concepts whose meaning shifts when the frame in which the concepts are encountered shifts. Note taking that is largely confined to labeling case parts suggests that students are mainly intent on filling in a schema.

A third explanation for some students low detection rates may lie in their underlying motivation to participate in the study. A few students vocalized boredom and fatigue with the cases, with some calling them "stupid." A few said $20 was insufficient pay for dealing with such cases, noting that they were the sort of thing that gave law and lawyers a bad name. For such students, then, a reverse Hawthorne effect may have been at work. Knowing they were only participating in an experiment not related to their law school grades or standing, some may have exerted little effort and deliberately underperformed.

A fourth possible explanation is that the demands of thinking aloud interfered with the cognitive resources needed to analyze the cases and thus surface more of their problems. Although there is significant research aimed at this concern, generally thinking aloud during reading is found to benefit subsequent recall of information and to help (not conflict with) other kinds of cognitive processing associated with active reading strategies (Pressley & Afflerbach, 1995, pp. 2–14). A careful review of the think-aloud transcripts revealed that only three students, notably all in the advisory group, stated that they found reading and thinking aloud to be difficult or obtrusive. One student, again in the advisory group, stated that she found thinking aloud to be helpful and that she routinely did so when reading cases for her classes.

Finally, a fifth explanation for some students' low problem detection rates could be that these students lacked much or recent exercise in surfacing questions and problems in the cases they read in their respective law schools. Such critical and especially cross-case reading may simply be something that has not been modeled for them as a practice in which to engage, although they may be expected to absorb these strategies by participating in the give-and-take of their law classes. This lack-of-modeling explanation is reflected in spontaneous comments made by some students during their post experimental debriefings. Some students claimed that they seldom or never had the opportunity in school to closely compare a series of cases as they did in this study, let alone in the context of a specific professional role.

How Might Future Studies Bring Together Legal Reading and Legal Problem-Solving Processes?

One suggestion is that, if research investigating the relations between legal problem solving and legal reading processes is to advance, it may be important to explore rela-

tions between what has been called metacognitive *problematizing* behavior and problem recognition. For instance, Deegan (1995) identified problematizing as a potentially transferrable metacognitive strategy in think-aloud data that appeared to enhance accurate and comprehensive retrieval of meaning from a law review article. She defined problematizing fairly broadly, as discrete think-aloud episodes in which the reader voiced a question, confusion, or tentative conclusion or prediction (p. 160). Her study carefully extracted the content and information hierarchy of a law review text as a criterion for assessing students' recitations.

It is important to note that although it may appear that the attempts to measure readers' problematizing behavior as Deegan did is the same as measuring problem recognition, there is in fact an important difference that may be particularly relevant to comprehending discourse in legal cases. Cases present judicial reasoning about the interpretation of rules and facts, and as such their meanings, past a point, are demonstrably indeterminate. They are not only open to and invite interpretation, they are normally applied to the resolution, through persuasive argumentation, of pending legal controversies (Burton, 1995). Although cases cannot be read to "say anything" a reader wants them to say, their reasoning and conclusions can often be reasonably interpreted to say more than one thing depending on the reader's purpose for reading and the legal controversy in view. Therefore, skilled legal readers must be able to derive and frame the relevant interpretative uncertainties inherent in these texts, as part of their case comprehension process. It is never simply enough to know what a case "says." One must know what plausible interpretations and applications of law could be made from it. The holdings at the heart of cases are often expressed in general terms and propositions whose scope of application is uncertain. In view of this situation, the reader's task and role can, and arguably should, change case comprehension. Different tasks and their related communication roles can increase or decrease the kinds of problems in legal interpretation that readers should see within a court's reasoning and holding. A focus on this kind of problem recognition fits in with the larger theoretical perspective on reading known as *constrained reasoning* (Stanovich & Cunningham, 1991).

Therefore, the important difference between studying problematizing behavior and studying problem recognition behavior is that the former approach risks assuming that the most important aspect of a text is its univocality and that text contains determinate retrievable meanings that are not problematic until readers interact with them. In contrast, a focus on reading as problem recognition implies that texts also contain indeterminacies and meaning problems that can themselves be enumerated as criterion measures just as determinate text content is enumerated in studies like Deegan's (1995). It is hoped that this study might encourage researchers to bring these two methodological approaches together in future studies, because doing so may help bring studies of legal reading and legal problem solving closer together than they have to this point. This research should be seen as no more than a modest start for this enterprise.

ACKNOWLEDGMENTS

REFERENCES

Amsterdam, A. G. (1984). Clinical legal education—A 21st century perspective. *Journal of Legal Education, 34,* 612–618.

Baillet, S., & Keenan, J. (1986). The role of encoding and retrieval processes in the recall of text. *Discourse Processes, 9,* 247–268.

Black and Brown, Inc. v. Home for the Accepted, Inc., A.2d 722 (Pa. Super. 335 1972).

Blasi, G. L. (1995). What lawyers know: Lawyering, expertise, cognitive science, and the function of theory. *Journal of Legal Education, 45,* 313–397.

Britt, M., Perfetti, C., Sandak, R., & Rouet, J.-F. (1999). Content integration and source separation in learning from multiple texts. In S. Goldman, A. Graesser, & P. van den Broek (Eds.), *Narrative comprehension, causality, and coherence: Essays in honor of Tom Trabasso* (pp. 209–234). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Bryden, J. (1984). What do law students learn? A pilot study. *Journal of Legal Education, 34,* 479–506.

Burton, S. (1995). *An introduction to law and legal reasoning.* Boston: Little, Brown.

Davies, M. (1987). Reading cases. *Modern Law Review, 50,* 409–431.

Deegan, D. H. (1995). Exploring individual differences among novices reading in a specific domain: The case of law. *Reading Research Quarterly, 30,* 154–170.

Deegan, D. H., Stratman, J., & Rideout, C. (1994). Explorations into law school literacy. *Professions Education Researcher Quarterly, 15*(4), 2–8.

Dewitz, P. (1996). Reading law: Three suggestions for legal education. *University of Toledo Law Review, 27,* 657–673.

Dewitz, P. (1997). Legal education: A problem of learning from text. *Review of Law and Social Change, 23,* 225–247.

Ericsson, K. A. (1988). Concurrent verbal reports on reading and text comprehension. *Text, 8,* 295–325.

Ericsson, K. A., & Simon, H. A. (1994). *Protocol analysis: Verbal reports as data.* Cambridge, MA: MIT Press.

Fajans, E., & Falk, M. (1993). Against the tyranny of paraphrase: Talking back to texts. *Cornell Law Review, 78,* 163–205.

Feltouch, P., Spiro, R., Coulson, R., Myers-Kelson, A. (1995). The reductive bias and the crisis of text in law. *Journal of Contemporary Legal Issues, 6*(1), 187–212.

Hacker, D. J. (1998). Self-regulated comprehension during normal reading. In D. J. Hacker, J. Dunlosky, & A. Graesser (Eds.), *Metacognition in educational theory and practice* (pp. 165–191). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Hofer, P. (1987). Cognitive strategies for interpreting law. *Dissertation Abstracts International, 48,* 5B. (UMI No. 87–16612)

Lundeberg, M. A. (1987). Metacognitive aspects of reading comprehension: Studying understanding in legal case analysis. *Reading Research Quarterly, 22,* 407–432.

Meta v. Yellow Cab Company of Pennsylvania, A.2d 898 (Pa. Super. 294 1975).

Mills, C., Diehl, V., Birkmire, D., & Mou, L.-C. (1995). Reading procedural texts: Effects of purpose for reading and predictions of reading comprehension models. *Discourse Processes, 20,* 79–107.

Mitchell, J. B. (1989). Current theories on expert and novice thinking: A full faculty considers the implications for legal education. *Journal of Legal Education, 39,* 275–297.

Moore, M. (1981). The semantics of judging. *Southern California Law Review, 54,* 151–294.

Oates, L. C. (1997). Beating the odds: Reading strategies of law students admitted through alternative admissions programs. *Iowa Law Review, 83,* 139–160.

Otero, J. (1998). Influence of knowledge activation and context of comprehension monitoring of science texts. In D. J. Hacker, J. Dunlosky, & A. Graesser (Eds.), *Metacognition in educational theory and practice* (pp. 145–164). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Palasota, A. (1991). Expertise and the law: Some recent findings from the cognitive sciences about complex human information processing. *Thurgood Marshall Law Review, 16,* 599–621.

Perfetti, C., Rouet, J. F., & Britt, M. (1999). Toward a theory of documents representation. In H. van Oostendorp & S. Goldman (Eds.), *The construction of mental representations during reading* (pp. 99–122). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading.* Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Rubin, D. (1984). Social cognition and written communication. *Written Communication*, *1*(2), 211–245.

Schlag, P. (1989). Missing pieces: A cognitive approach to law. *Texas Law Review, 67,* 1195–1250.

Senger, C. (1989). Learning legal reasoning in law school: The differences between first and third year students. *Dissertation Abstracts International, 50* 07A. (UMI No. 89–23890)

Senger, C. (1993). Thinking aloud protocols: A diagnostic tool for teaching legal problem solving. *Thomas M. Cooley Law Review, 10,* 368–382.

Skinner, A. (1988). Writing in a law firm: Cognitive processes and texts grounded in social knowledge. *Dissertation Abstracts International, 50* 02A. (UMI No. 89–09740)

Stanovich, K., & Cunningham, A. (1991). Reading as constrained reasoning. In R. Sternberg & P. Frensch (Eds.), *Complex problem solving: Principles and mechanisms* (pp. 3–60). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Stratman, J. (1989). The rhetorical dynamics of appellate court persuasion: An exploratory comparison of advocates' brief composing process with court clerks brief reading and review process (Doctoral dissertation, Carnegie Mellon University, 1988). *Dissertation Abstracts International, 50,* 05A1420.

Stratman, J. (1990). The emergence of legal composition as a field of inquiry: Evaluating the prospects. *Review of Educational Research, 60,* 153–235.

Stratman, J. (1994). Investigating persuasive processes in legal discourse in real time: Cognitive biases and rhetorical strategy in appeal court briefs. *Discourse Processes, 17,* 1–57.

Waern, Y. (1988). Thoughts on text in context: Applying the think aloud method to text processing. *Text, 8,* 327–350.

Weinstein, I. (1998). Lawyering in the state of nature: Instinct and automaticity in legal problem solving. *Vermont Law Review 23,* 1–57.

Wetlaufer, G. B. (1990). Rhetoric and its denial in legal discourse. *Virginia Law Review, 76,* 1545–1597.

Wiley, J., & Voss, J. (1996). The effects of "playing historian" on learning history. *Applied Cognitive Psychology, 10,* 63–72.

Wiley, J., & Voss, J. (1999). Constructing arguments from multiple sources: Tasks that promote understanding and not just memory for texts. *Journal of Educational Psychology, 91,* 301–311.