thing is that we and our students look at what the effects of writing metaphors are, what they imply about writing, and how they match or might amplify our experience. When they have students compare their metaphors to those of professional writers, Tomlinson and Mortensen minimize possible intimidation by emphasizing that the purpose is to find similarities and common problems.

Finally, the speakers summarized their reasons for using metaphorical stories in the classroom. In addition to taking authority for their own writing and balancing personal with external assessment, students also need to develop better self-monitoring processes because many do not have a language for thinking about their processes. (Tomlinson's survey of 23 secondary and college writing texts showed that there was very little figurative language in these texts). The speakers have found that by comparing metaphorical stories, students can gain confidence and learn that other writers (including professionals) may encounter similar problems. Students begin to talk like writers and develop a stronger interest in writing.

THE USES OF COMPUTERS IN THE ANALYSIS AND ASSESSMENT OF WRITING

Speakers: William Wrench, University of Wisconsin-Stevens Point
Helen Schwartz, Carnegie-Mellon University

Introductor/Reporter: Marie Jean Lederman, NTTW and Baruch College, CUNY

William Wrench discussed the current state of the field of computer analysis of student writing, dividing the software programs into six different categories, each of which has a different pedagogical orientation. The first category is error checkers. These programs focus on homonym confusions, sexist language, usage errors, and idiosyncratic phrases. Some examples are Writer's Helper (Conduit), Sensible Grammar (Sensible Software), RightWriter (RightSoft), Ghost Writer (MECC), and Writer's Workbench (AT&T).

The second category is reformatters which, rather than find errors, make it easier for writers to find their own errors. One of the first programs was Quill (DC Heath) which included a combination of prewriting, writing, and revising activities. For example, to help students review their work, it displayed each sentence of their paper alone on the screen. Rather than make statements about changes in the sentence, the program allowed students to look at each sentence in a new way. Other newer reformatters include Ghost Writer (MECC) and Writer's Helper (Conduit). The third category of programs is audience awareness programs. These programs include readability formulas and they pinpoint vague references and other problems.

The fourth category is student conference utilities. These computer programs try to help students develop editing skills as they read each other's papers and "send" comments to each other. Two examples are Quill and Alaska Writer (Yukon-Koyukuk School District). The fifth category is grading utilities, programs designed to help teachers in the clerical aspects of paper grading. Students turn in their work on disks, and the teacher uses the computer to help grade the work. By creating ten or twelve messages for major errors, teachers can respond with just a keystroke or two to most of the mistakes they are likely to see. Examples are the RSVP project (Miami-Dade Community College) and Writer's Network (Ideal Learning).

The last category is automatic graders. This is the logical "next step" after grading utilities. Ellis Page of the University of Wisconsin proved twenty years ago that a computer could grade papers quite well based on a formula of paper length, sentence length, level of subordination, and word length. However, merely assigning a grade isn't enough in a classroom situation in which students expect not only a grade but a range of responses from teachers. It might be possible, however, to use such computer graders in large-scale assessment programs. Wrench concluded that there are many decisions to be made about how computers will be used in writing analysis, but it is certain that there are already many opportunities and, surely, many more to come.

Helen Schwartz began by discussing several purposes of assessment: diagnosis and revision as well as improved self-evaluation. The range of writing behaviors which can be assessed are ideas, organization, rhetorical presentation (purpose and audience assessment) and grammatical correctness. In answer to the question, "How can computer programs assess these behaviors for these purposes?" she first gave a short answer, "No computer program alone is now accurate or helpful enough" and most of the existing programs may overwhelm the student with too much information at once. Style checkers can draw attention to problems, but the student must make the decisions. And sometimes readiness formulas can lead students to vary sentence length by creating run-on sentences and fragments. Schwartz pointed out that "Computer programs are useful as delivery systems for teacher, peer and self-assessment. They help students become aware of problems in their writing and help them to solve these problems." She gave four examples:

1) Prewriting programs such as "ORGANIZE" (Helen Schwartz, Wadsworth Publishing) can be used not only to help students see the shape of their papers but also to desensitize peer review.
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1) Prewriting programs such as "ORGANIZE" (Helen Schwartz, Wadsworth Publishing) can be used not only to help students see the shape of their papers but also to desensitize peer review.
 Templates, such as the self-evaluation form given in "Integractive Writing," help students assess strengths and weaknesses.

3) "SEEN" (Schwartz, Conduit) includes a built-in bulletin board where peer review can take place.

4) Programs for teacher and peer response to paper drafts, including (a) "Chat and Comments," developed by Christine Neuwith at Carnegie Mellon which facilitates discussion and peer review; (b) "PROSE" (Promoted Revision of Student Essays by Davis, Kaplan, Martin, McGraw Hill) which allows summary comments; comments embedded in the paper; revision notes; and handbook-like responses with an overview of the error, further explanation, and then interactive tutorials on each of 18 features; and (c) "Prentice Hall College Writer" which is a word processor that allows access to an on-line handbook and allows the insertion of comments that can include excerpts from the on-line handbook.

The discussion that followed centered on examples of software described and demonstrated by the speakers.

LEGAL RAMIFICATIONS OF WRITING ASSESSMENT

Speaker: William Lutz, Rutgers University, Camden
Introducer/Recorder: Chris Anson, University of Minnesota

William Lutz, who holds a law degree and is a member of the Pennsylvania Bar, addressed the importance of considering the legal constraints under which testing must operate. Lutz began by distinguishing the different kinds of testing programs: those conducted within an institution and those conducted outside the institution. External testing programs, such as those conducted by a school district or by a state agency, are governed by a series of laws and court decisions. Internal testing programs, such as course placement and proficiency testing, come under fewer legal constraints and exist, at present, in a legal nether world. However, there is enough legal precedent to warrant caution by anyone involved in any testing program.

According to Lutz, testing programs may be attacked from a variety of legal approaches. Title VI of the Civil Rights Act prohibits any practice that would have the effect of restricting an individual, on the grounds of race, color, or national origin, "in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit." It is important to note that this law would judge a testing program by its effect, not its purpose. Moreover, the burden of proof in any legal action would fall on those conducting the test. Thus, under this law, testing programs with disproportionate effects on minority students are subject to close judicial scrutiny. If a state has a law guaranteeing an education to all its citizens, then all citizens have a property interest in an education. A testing program in that state can be attacked as a denial of a property right without due process. Such attacks have succeeded.

Lutz pointed out that a testing program can be attacked as a denial of a liberty interest. Due process guarantees a right to liberty, and this liberty interest is infringed where a stigma attaches to the student as a result of the test. The 14th Amendment to the Constitution states that "No person shall... deny to any person within its jurisdiction the equal protection of the laws." While state laws may treat differently for various purposes by classification "persons who are similarly situated with respect to the purpose of the law," they must be accorded equal treatment. In hearing cases brought under this Amendment, the court will ask two questions: (1) has the state acted with an unconstitutional purpose? (2) has the state classified together all and only those persons who are similarly situated? For example, if someone wanted to attack a placement test there are two possible arguments under the 14th Amendment which might be used. First, the test itself can be attacked by arguing that while testing may be a legitimate means of classification, this particular test is so inadequate that one cannot possibly tell whether a particular student is ready for or has the ability to do college level work. A second approach is to attack the tests results by arguing that while the means used to classify a student may be legitimate, these means are so imprecise that one cannot possibly tell whether the student has been classified correctly.

There are some vague areas here, or the legal nether world as Lutz calls it. Before the due process requirements of the 14th Amendment can apply to a cause of action, two questions must be answered: (1) do the concepts of liberty or property encompass the asserted interest? and (2) if due process does apply, what formal procedures does due process require to protect the interest adequately? In other words, an individual must have a legitimate claim of interest before due process can apply. Thus far, a college education has not yet been found to be a benefit for which someone can assert a claim of entitlement. However, a claim of liberty could apply because testing may affect an individual's opportunity to choose his or her own employment. This issue is still open for litigation.

Based upon a review of federal court decisions, Lutz offered the following Guidelines for Testing:

1. The purpose of the test must be clearly delineated. The test must be matched with...