

humanistic or theoretical. As the industrial, technological world changes, so must technical writing.

(2) If English departments insist on making technical writing fit comfortable, traditional roles, if they are not responsive to the requirements of the real world, then technical writing may become as unpopular and unappealing to students as required literature courses. Departments whose students take technical writing are not at all interested in their students studying technical writing as a humanities course or as a course in theory of rhetoric. Considering the practice that most students need in organizing material and in writing clear, correct, effective sentences, there simply is no time in a basic technical writing course to devote to ethics and inapplicable rhetorical theory.

(3) Rather than lament the decaying state of the humanities, English departments should see pragmatic writing courses as an opportunity to show students and the real world that English courses can be useful and profitable, that English professors can actually identify with and contribute to the real world. Why can't technical writing, taught to prepare students to write for the changing world of work, coexist with literature? Literature, the stronghold of enculturation, can teach students a great deal about human nature and communal values. Clearly, students need as much knowledge about the human personality and community as possible when they consider the problems of audience, the concept that lies at the foundation of technical writing. Literature and writing should be seen as allies in preparing students for life beyond the academy, but being allied does not necessarily mean that both subject areas should be taught the same way, from the same point of view, in order for them to work together for the good of the students and for the good of English as a profession. A famous liberal arts dean once remarked that English departments that continue to uphold their traditional role of literary inculcators rather than to

reorient their priorities are trying to sell buggy whips.

(4) Technical writing will continue to increase in popularity because business and industry are demanding literate, articulate graduates. The paperwork explosion is a major problem, a reality which demands verbal facility at a time when student writing and reading skills continue to decline.

The ultimate possibility that English departments must consider is this: students do not necessarily have to receive their writing instruction in English departments. Colleges of science, engineering, and technology are easily swayed by cogently presented arguments from schools like the University of Michigan College of Engineering which have their own effective writing programs. English departments must see that technical writing is presented to meet actual, current industrial and scientific writing requirements. Otherwise, they can expect to see the teaching of technical writing usurped by departments and colleges outside English and liberal arts. These "alien" departments and colleges are, I assure you, very committed to preparing their students to write effectively for the world of work.

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### *Carolyn Miller Responds:*

The technical writing course that I teach at North Carolina State is not, as Professor Tebeaux implies, a course in rhetorical theory or ethics. It is a writing course that is informed by rhetorical theory. A theory of rhetoric, if it is any good, does not ignore "purely pragmatic topics and problems," as Professor Tebeaux asserts, but it informs them and provides ways to approach and solve them. A theory of rhetoric as based in the activities and values of a community in fact suggests the very approach that Pro-

fessor Tebeaux advocates, using the settings and situations that require the reports the student must learn to write as the focus for class assignments.

My understanding of rhetoric is what leads me to organize my course around the kinds of writing situations that students will encounter as practicing scientists and engineers. Through the use of real or simulated situations, and through an emphasis on the situational basis for all communication, I encourage students to experience some sense of the community in which they will conduct their professional communication. In class, we talk a lot about the purposes of reports; much of what I say I learned from Dwight Stevenson and J. C. Mathes as a participant in the first University of Michigan summer conference on the teaching of technical writing. We talk about readers as persons and about their functions in technical organizations; we talk about writer-roles—about what the engineer must be and seem as he or she creates a self through a report. We talk about scientific and technical literature and the ways in which patterns of information exchange affect the development of scientific knowledge and its technical applications. We talk about all this so that students' writing will be more informed, more intelligent, and more responsive to the rhetorical realities of that world of work.

If Professor Tebeaux had understood the point of my original essay, she could not have said that "the real writing of the real industrial world [has] little to do with enculturation." The culture that technical writing students must become acquainted with consists of the values, aims, and methods of the professional community they intend to enter.

Even though our general approaches to the teaching of technical writing seem similar, our aims are different, and the effects on students are probably different, for what students learn is never the same as what one teaches. Two distinctions that concern me most are whether we treat writing as a basic skill or as an intel-

lectual discipline and, in consequence, whether we treat students as technicians or as professionals. I don't think that either of these issues has much to do with whether technical writing instructors are employed by English departments or by technical divisions in a university. In my experience, there is a tendency on the part of both English faculty and engineering and science faculty to think of all writing courses as being somehow remedial, as totally lacking in content, and as concerned only with correct style. A freshman composition course that attempts no more than this creates problems, but a writing course for college juniors and seniors that goes no further is a disgrace. In the *Engineering Education* article that Professor Tebeaux cites, Mathes, Stevenson, and Klaver make the point that engineering faculty must "define technical writing as a professional course rather than as a basic skills course," a course in which "students should apply theory—in this case communication theory—to actual problems."

A technical writing course that focuses on the goals that Professor Tebeaux suggests, "documenting information clearly, correctly, and economically," and "organizing material and . . . writing clear, correct, effective sentences," will not produce the "literate, articulate graduates" that business and industry demand. No single course of any sort will do that, but I submit that a technical writing course that recognizes that good writing is not a skill so much as a mode of understanding will go much further than an emphasis on what Richard Lloyd-Jones calls "scribal mechanics." Writing in the May 1979 *ADE Bulletin*, he says, "I claim for writing a function that is often, although not inevitably, overlooked in the servile-writing courses. Writing a report about an accident in a factory is not only a useful business procedure but also a way to define a world of action, a set of values about behavior."

Educating technical and scientific professionals requires that we demand more from them than slavish correctness and

that we challenge them with more than a bigger paycheck. Alfred North Whitehead's description of technical education suggests the depth we can legitimately attempt in writing courses that are part of that education:

Technical education should be . . . creative experience while you think, experience which realizes your thought, experience which teaches you to co-ordinate act and thought, experience leading you to associate thought with foresight and foresight with achievement. Technical education gives theory, and a shrewd insight as to where theory fails.

In short, technical education for the professional requires critical thinking. For the engineering or science student, critical thinking about communication involves an understanding of the potentials and limitations of the common modes of thought, actions, and values of the professional community he or she will join. It requires a distancing from and examination of that community. To accept without question the point of view of that community as the sole criterion for course design, as Professor Tebeaux recommends, is to preclude the opportunity for such critical thought. That point of view becomes an unexamined rhetorical vision. This was the point of my original essay: however we teach the handling of language, we are teaching a rhetoric, and an accompanying ethic. One cannot subtract rhetoric from discourse; the attempt to do so—the illusion that one is doing so—creates a rhetoric of its own, a particularly bankrupt one. We owe our students an education that makes them aware of the rhetoric of their professions so that they can not only use it to best advantage but change it when it needs changing.

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### *Elizabeth Harris Responds:*

One of the risks of proposing a new approach to anything is that somebody will

think you mean thereby to exclude all of the tried and more-or-less true approaches. A second and, to my mind, far worse risk is that not only will somebody make that mistake, he or she will proceed to applaud you as the new iconoclast. Professor Tebeaux has misinterpreted my "Applications of Kinneavy's *Theory of Discourse* to Technical Writing," but in doing so she has usefully drawn attention to the dangers of an overly theoretical, inadequately practical approach to the basic undergraduate technical writing course.<sup>1</sup>

I agree with her entirely that the fundamental aim of any such course must be to prepare students "for the writing they will have to do in business and industry"—and in various professions. What I suggested was that discourse theory can help the undergraduate technical writing course achieve that aim. Professor Tebeaux seems to misunderstand, first of all, the nature and value of theory in general, in any field. As a result, she misapprehends the relation that discourse theory—if it has any value—must have to empirical research in technical writing and to the experiential wisdom of people in business, industry, and the professional fields for which our students are being prepared. Thus, it is not surprising that she also misunderstands the use that I propose for discourse theory in the undergraduate technical writing course.

That "theory" has become a fad—with attendant abuses and absurdities—in the study and teaching of writing and literature should not obscure the fact that (in the dictionary-ese of my *Webster's New World*), the word denotes simply "a formulation of apparent relationships of underlying principles of certain observed

<sup>1</sup>I recognize that there may be a whole curriculum of undergraduate technical writing courses. When I write, in the succeeding paragraphs, "the undergraduate technical writing course," I am referring to a first, general course. I also recognize that such courses may appropriately differ from institution to institution, and that my own ideas have evolved in the circumstances provided by a large state university.