# WHAT'S PRACTICAL ABOUT TECHNICAL WRITING?

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Courses and programs in technical writing are both praised and damned for being "practical." Other writing courses are practical, to be sure: in general, practical rhetoric emphasizes that discourse is a means for pursuing a goal. Thus, freshman composition aims to help students be more effective as students, technical writing aims to help them be more effective as engineers or accountants or systems analysts, and the writing instruction that accompanies many literature courses aims to help them to be more effective as reader-critics. But since technical writing is singled out for being practical, it is worth considering what makes it so.

## THE MEANING OF "PRACTICAL"

Most immediately, the practical seems to be concerned with getting things done, with efficient and effective action. Furthermore, efficiency and effectiveness seem more important for some types of action than for others; that is, some actions themselves have practical aims (rather than aesthetic or ritual ones), actions concerned with the material necessities of making a living or managing a household. One can thus *be* practical (or impractical) *about* practical action. *Being* practical suggests a certain attitude or mode of learning, an efficiency (or goal directedness) that relies on rules proved through use rather than on theory, history, experience, or general appreciation. Practical rhetoric therefore seems to concern the instrumental aspect of discourse—its potential for getting things done—and at the same time to invite a how-to, or handbook, method of instruction. Technical writing partakes of both these dimensions of practical rhetoric.

The rhetoric of the early Greeks also involved both dimensions. They emphasized that rhetoric was an art (or techne). This meant (to Aristotle, at least) that rhetoric was conceptualized and teachable (not a knack, as Plato had feared) but neither certain nor absolute (not a science, as Plato had hoped). Greek rhetoric thus initiated both a handbook tradition of instruction and a counterposed theoretical appreciation for the multiplicity of relations between means and ends.

Richard Bernstein has suggested that there are both "low" and "high" senses of "practical," two senses that parallel the handbook and theoretical traditions of rhetoric. It is the low sense, Bernstein says, that calls to mind "some mundane and bread-and-butter activity or character. The practical man is one who is not concerned with theory (even anti-theoretical or anti-intellectual), who knows how to get along in the rough and tumble of the world" (x). The high sense, which derives from the Aristotelian concept of praxis and underlies modern philosophical pragma-

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tism, concerns human conduct in those activities that maintain the life of the community. One of the many reasons for the discrepancy between these two senses of the practical highlights the dilemma of technical writing, which is usually called practical in the low sense (by both its friends and its enemies, incidentally). This reason has to do with the social structure of the Greek city-state, which permitted the free citizen to be concerned with the good of the polis without being much concerned with bread-and-butter activities. The reason, of course, is the institution of slavery. Manual labor and most commercial activity were performed by noncitizens—slaves, foreigners, women. These activities were "preconditions" to the fulfillment of human potential in self-government, according to Nicholas Lobkowicz: "One would almost be tempted to say that the Greeks considered all 'prepolitical' activities prehuman and that only in the political life were they able to see a way of life which transcended the animal realm" (22). Technical writing, the rhetoric of "the world of work," of commerce and production, is thus associated with what were low forms of practice from the beginning. In a world in which it is more dishonorable to own slaves than it is to work for a living, we might question whether this association should prevail.

## A CONCEPTUAL CONTRADICTION

Before trying to suggest what it might mean to apply the higher sense of practical to technical writing, I want to indicate some difficulties in accepting the low sense uncritically, as many technical writing teachers have. These difficulties are revealed by a contradiction within the self-justifying discourse of technical writing pedagogy: the attempt to hold both that nonacademic rhetorical practices are inadequate (and therefore need improvement through instruction) and that they serve as authoritative models (and therefore define goals for instruction). We seem, that is, uncertain about where to locate norms, about whether the definition of "good writing" is to be derived from academic knowledge or from nonacademic practices. Most teachers will recognize the contradiction in the familiar dilemma of having to admit to students the discrepancy between practices that are supposed to be effective and those that are actually preferred and accepted.

The first side of the contradiction is the familiar justification for teaching technical writing. We teach it because when students graduate and begin writing on the job, they do not do very well. In the technical writing textbook I use, the first chapter, "Why Study Technical Communication?" documents the "inadequate communication skills of many technical professionals" (Olsen and Huckin 7). For example, it quotes a survey about recently graduated civil engineers showing that writing and speaking are the areas of competence most important to civil-engineering practice but that about two-thirds of recent graduates are judged "inferior" in these areas; results for mechanical and electrical engineers are similar. Complaints about technical writing from senior officials in science and industry include "foggy language," failures of emphasis and coherence, illogical reasoning, poor organization—a familiar litany. Most technical writing textbooks begin with the same rationale, that nonacademic rhetorical practices are wanting. The justification for academic instruction is that academics know something that can help improve professional practices.

The second side of the contradiction derives from the research that interested faculty members have begun to do on rhetorical practices in business, industry, and science. This research is justified not only by the academic assumption that knowledge is a good thing but also (and often primarily) by the belief that knowledge of nonacademic practices is necessary to define goals for teaching practical rhetoric. As Paul Anderson puts it, "We [educators] must first understand the profession, then design our curricula accordingly. Only if we understand intimately the job we intend to prepare our students to perform can we create effective professional programs" ("What Technical" 161).

One of the favorite research projects is the survey, which can show what kinds of work-related writing the population surveyed does, how important it seems to be, what its common problems are, and what qualities and features are valued. In reviewing selected surveys, Elizabeth Tebeaux notes discrepancies between instructional assumptions and industrial practices and concludes that "several curricular changes are clearly mandated" in order to "meet the communication needs of writers in industry" (422). Anderson reviewed fifty surveys, because they can provide "teachers with important insights they can use as they design courses in business, technical and other forms of career-related writing" ("What Survey" 4). Many surveys, such as those by Marcus Green and Timothy Nolan and by Bill Coggin, have been proffered as authoritative sources of information abut what a curriculum should accomplish for its graduates. Ethnographic research has also been justified in instructional terms: according to Stephen Doheny-Farina, for example, "By learning more about nonacademic contexts for writing, we are learning more about the kinds of rhetorical demands faced by many of our college graduates," and this knowledge "can inform the teaching of writing" (159).

Major national grants have gone to researchers engaged in work justified in these same ways, a clue to the institutionalization of this line of reasoning, as well as to its extension from technical writing to composition in general. The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored a project on writing-program evaluation at the University of Texas; the project produced a report saying that "before any college writing program can be judged effective or ineffective, we must know first if what it teaches has value to its graduates in later life. Like any educational program, the overall effectiveness of writing programs must be judged according to the needs of the population they serve" (Faigley et al. 1–2). Another FIPSE grant went to Wayne State for a university-industry collaborative effort on research and curriculum development in professional writing. The researchers present cooperation between academics and practitioners as the way to "ensure that students are prepared for the diverse communication tasks outside the university" (Couture et al. 392–93). FIPSE has also sponsored research on collaborate writing in the workplace by Lisa Ede and Andrea Lunsford, who cite as a major problem "the dichotomy between current models and methods of teaching writing . . . and the actual writing situations students will face upon graduation"; this dichotomy results, in part, from "our lack of detailed understanding about on-the-job writing" ("Research" 69). The National Institute of Education earlier sponsored work by Lee Odell and Dixie Goswami on writing in nonacademic settings; their study also suggests that our ability to teach writing will be "enhanced" by more complete understanding of how people come to write successfully on the job ("Writing" 257).

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## PRACTICE AS DESCRIPTIVE OR PRESCRIPTIVE

In its eagerness to be useful—to students and their future employers—technical writing has sought a basis in practice, a basis that is problematic. I do not mean to suggest that academics should keep themselves ignorant of nonacademic practices; indeed, much of the research I cited above has been extremely illuminating. But technical writing teachers and curriculum planners should take seriously the problem of how to think about practice. The problem leads one to the complex relation between description and prescription. Odell warns against mistaking one for the other: "we must be careful not to confuse *what is* with *what ought to be* . . . We have scarcely begun to understand how organizational context relates to writing, and we have almost no information about which aspects of that relationship are helpful to writers and which are harmful" (278). Anderson also warns us about this mistake: in presenting a model of the technical writing profession for use in designating curricula, he cautions that the model "represents an ideal. It is built around the *best* practices of the profession, not around *common* practice—or malpractice" ("What Technical" 165). He gives as examples usability testing (not common but good) and readability formulas (common but bad). Neither Odell nor Anderson, however, gives us much help in understanding what is helpful and what is harmful, what is good practice and what is malpractice. Even David Dobrin's discussion of the contradictions involved in teaching to the standards of employers, although it recommends both curricular and corporate reform, relies finally on accepting practices of the workplace on their own terms; teachers should "make people at work better able to deal with others" ("What's the Purpose" 159).

At this point, it is worth recalling an earlier (unfounded) study of writing in nonacademic settings, "Writing, Out in the World," a chapter of Richard Ohmann's *English in America*. Ohmann avoids the contradiction of taking practice as both imperfect and authoritative by positing a wider perspective from which to make such judgments; he requires, as Odell and Anderson and Dobrin do not, a basis for evaluating a practice other than that of the practice itself. The nonacademic writing Ohmann examined is that of futurists and forecasters, of foreign-policy analysts, and of the government officials who wrote the memorandums we call "The Pentagon Papers." Ohmann sought to establish, not that academic writing is different from writing in the workplace, but that they are dangerously similar; he concludes that academic instruction in writing "has helped, willy nilly, to teach the rhetoric of the bureaucrats and technicians" (205). He claims that the

> writing of the powerful and influential shares some characteristics with the required writing of their college-age sons and daughters; that these characteristics are fairly important to the style of thinking and planning that guides the most powerful country in the world; and that this style has some systematically dangerous features when it operates not in the classroom but on the stages of history. (173)

A similar and more direct charge has been made recently by Susan Wells, who claims that "the ideology of technical writing explicitly assents to its instrumental subordination to capital; the aim of the discipline as a whole is to become a more responsive tool" (247). Being useful is not necessarily good, according to these Marxist critics, but little in the discourse of technical writing allows for this conclusion or explores its consequences. Because the Marxist critique features practical activity as a central concept, it raises questions that are particularly germane to technical writing, questions about whose interests a practice serves and how we decide whose interests should be served.

## PRACTICE AND HIGHER EDUCATION

The uneasy relation between nonacademic practice and academic instruction has been part of academic discussions about technical writing from their beginnings in the late nineteenth century, as Robert Connor's historical work has shown. Connors documents recurrent debates over whether practical or humanistic goals should prevail in technical writing courses (or, as they were commonly called, "engineering English"), whether, that is, such study should prepare technical students for work or for leisure. Moreover, these debates reflect a larger debate in American higher education, about the appropriate relation between vocational preparation and cultural awareness. In mid-nineteenth century, this debate transformed the American college curriculum, according to the educational historian Frederick Rudolph, who points specifically to the Morrill Act of 1862 and the founding of Cornell in 1866. The first president of Cornell, Andrew White, "confronted all the choices that had been troubling college authorities: practical or classical studies, old professions or new vocations, pure or applied science, training for culture and character or for jobs" (117). White opted for pluralism, for providing many courses of study in preparation for many kinds of lives: "the Cornell curriculum . . . multiplied truth into truths, a limited few professions into an endless number of new self-respecting ways of moving into the middle class" (119). In a similar vein, Laurence Veysey's study of the emergence of the American university in the nineteenth century traces the development of "utility" as a basis for education. During this period, according to Veysey, "America was a scene of vocational ambition," both in terms of individual aspirations and in terms of the desire for public service. At the same time, the notion of public service broadened to include practical and technical occupations, not just the gentlemanly occupations for which earlier education had been preparatory. "Vocational training," says Versey, "directly affected the undergraduate curriculum of the new university" (66).

Other commentators have emphasized that the relation between instruction and practice is part of a more general condition, the subsistence of higher education in a socioeconomic matrix. Clark Kerr, in *The Uses of the University*, says that "the life of the universities for a thousand years has been tied into the recognized professions in the surrounding society, and the universities will continue to respond as new professions arise" (111). (This view, of course, implies that the classical curriculum served as preparation not for leisure but for the upper-class vocations of law, politics, and the ministry.) John Kenneth Galbraith has noted that "it is the vanity of educators that they shape the educational system to their preferred image. They may not be without influence, but the decisive force is the economic system" (236). More specifically, in his critique of nonacademic writing, Ohmann comments that

> the constraints upon English from the rest of the university and especially from outside it are strong. . . .[T]he writers of the textbooks and the planners of courses . . . can hardly

ignore what passes for intellectual currency in that part of the world where vital decisions are made or what kind of composition succeeds in the terms of that part of the world. (206)

Current enthusiasm for "industry-university collaboration" in applied research and development is perhaps the most recent manifestation of this general and necessary relation. But there is also a repertoire of accepted mechanisms for channeling the relation—internships, advisory councils, certification of graduates, and procedures for justifying and accrediting programs. These mechanisms are used in educational programs for the established professions, like law, medicine, engineering, and teaching, as well as in several areas of practical rhetoric with relatively long curricular histories, like journalism and public relations. For the most part, the channels these mechanisms create are one-way: influence flows primarily from nonacademic practices to the academy. The gradient is reflected in the language at the industry-university interface, which includes, on the one hand, "demand," "need," "value" and, on the other, "response," "service," "utility." My own university, a land-grant institution, provides a case in point. Its "Mission Statement" declares that the university "has responsibility for the academic, research, and public service programs in areas of primary importance to the State's economy." University policies concerning proposals for new degree programs require statements concerning the proposed program's relation to the institutional mission, to student demand, and to "manpower" needs in the state.

Teachers of technical writing have advocated applying the mechanisms of nonacademic influence to their new programs, using the same kinds of language. Internship programs should be adopted in technical communication programs, according to a recent review of literature, because they encourage students to relate their study of theory to practice, permit faculty members to "keep in touch with" current practices, and enable employers "to influence college programs" (Gloe 18–19). Advisory councils are advocated because they "integrate the endeavors of the two worlds [academic and business-industrial] directly and in a[n] . . . effective manner" (Brockmann 137). (Certification has been discussed within the Society for Technical Communication, but there is insufficient consensus in the profession to arrive at standards ["Certification" 6]; accreditation is now being investigated by the society [*Strategic Plan*].)

Such language echoes the discourse of other professional programs, programs that have provided precedents for technical communication.

### Library Science
It is widely believed and reported that a chasm of mutual ignorance and indifference separates librarians and library educators from one another. . . . All sectors of practice regularly and strongly express a desire for more influence over the content and character of professional education. (Clough and Galvin 2)

### Public relations
Practitioners and educators must act in concert to guide public relations in the direction of professionalism. (Commission on Graduate Studies in Public Relations 5)

### Information science
Lack of communication between the employers of information professionals and the institutions that educate and train them is one reason that educational institutions are not meeting needs and demands of the changing environment and new technologies. (Griffiths, abstract)

### Business
MBA curricula must be reevaluated and, perhaps, restructured if they are to meet business expectations, and—from the point of view of business—if they are to better prepare students for the real world in which they will build their careers. (Jenkins and Reizenstein 24)

### Journalism
What training and preparation do radio and television journalists consider important for a career in their field? Answers . . . should contain valuable insights for the broadcast journalism educator. (Fisher 140)

### Training and Development
Training activities involve a wide variety of skills, abilities, knowledge, and information. . . . An interdisciplinary approach to T&D preparation is important, given the range of competencies required. (Reed 11)

This discourse is infected by the assumptions that what is common practice is useful and what is useful is good. The good that is sought is the good of an existing industry or profession, with existing structures and functions. For the most part, these are tied to private interests, and to the extent that educational programs are based on existing nonacademic practices, they perpetuate and strengthen those private interests—they do indeed make their faculties and their students "more responsive tools." As the minutes of one meeting of the advisory council to the School of Engineering at my university indicate, regular contact between the university and industry "makes students more valuable to industry."

## PRAXIS AND TECHNE

My discussion so far has relied on a set of related oppositions that pervade the discourse of higher education:

theory versus practice
academy versus industry
ivory tower versus marketplace
idle speculation versus vocationalism
inquiry versus action
gentleman-scholar versus technician-dupe
contemplation versus application
general versus particular
knowing-that versus knowing-how
science versus knack

In this form the oppositions are probably unresolvable, and the best we can hope for is Anderson's notion that they should form a "creative tension" (Introd. 6).

Another approach is to suspect the worst: that a dichotomy so widespread must be (at least partly) false. And in fact, Aristotle's characterization of rhetoric as an art, rather than a science or a knack, cuts through these oppositions with a middle term—techne. As he defines it in the *Nicomachean Ethics*, "a productive state that is truly reasoned" (VI, iv), techne requires both particular and general knowledge, both knowing-how and knowing-that; techne is both applicable and conceptualized. Donald Schön's recent critique of professional education relies on the same middle term: it is "art," he says, that professionals display in practice, and it is art that unifies theory and application in a process he calls "reflection-in-action." Aristotle's *techne rhetorike*, or treatise or rhetorical art, joins theory and practice by deriving knowing how from knowing that, prescription from description. Although positivist philosophy claims that this derivation is fallacious ("you can't get 'ought' from 'is'"), one of the major insights of Marx, according to Bernstein, is to deny the positivist fallacy. Marx (as well as Aristotle) is able to derive from description of existing social practices the shape of human need and potential—which provide the basis for prescription.

But to understand Aristotle's *Rhetoric* only as a techne is to miss what Aristotle himself has to say about practice. Understood as techne, Aristotle's treatise would fall within the handbook tradition, as a set of instructions that helps one produce texts. Such a treatise would concern productive knowledge, or *episteme poietike*, one of three kinds of knowledge in Aristotle's system: theoretical (concerned with knowing for its own sake), practical (concerned with doing), and productive (concerned with making). According to George Kennedy, Aristotle does not make the connection between rhetoric and productive knowledge (as he does for poetics) but treats rhetoric as theoretical knowledge concerned with "discovering" the available means of persuasion (63).

The remaining alternative—that Aristotelian rhetoric is practical, rather than theoretical or productive—has been argued by Richard McKeon, and its implications have been explored by Eugene Garver. To see rhetoric as practical, in Aristotle's system, is to emphasize action over knowledge or production; rhetoric becomes a form of conduct, like the related practical realms of ethics and politics, which are constant background presences in the *Rhetoric*. Aristotle distinguishes carefully in the *Nicomachean Ethics* between production and practice, poiesis and praxis: as distinct from "science," or theoretical knowledge, both concern the variable, or that which can be other than it is; but they differ in that production "aims at an end other than itself," the product, and practice aims at its own performance, at "doing well." The reasoning appropriate to production takes the form of techne, art or technique, and the reasoning appropriate to performance, or conduct, takes the form of *phronesis*, prudence; for Aristotle there can be no art, or technical knowledge, of conduct. Prudence is the reasoning that makes one "capable of action in the sphere of human goods" (*NE* 6: v). Like techne, prudential reasoning is situated to undermine the oppositions that plague discussions of professional education, for it necessarily concerns both universals and particulars: it applies knowledge of human goods to particular circumstances (*NE* 6: vii; Garver 645). Unlike techne, however, which is concerned with the useful (that is, with the quality of a product given a set of expectations for it), prudence is concerned with the good (that is, with the quality of the expectations themselves).

Aristotle's concept of praxis has also informed some recent thinking about human action. As the central concept in Marx, praxis highlights the way in which the human person "is the result of his [or her] own work" (Bernstein 39; see also Lobkowicz 418–20). Human belief structures and social relations are understood to be used in practical relations between human beings and objects. Schön's account of professional practice emphasizes the "knowing inherent in intelligent action" (50). Moreover, practices, as Alasdair MacIntyre has insisted, create not only knowledge but their own goods, and because practices are necessarily social, these goods require "subordinating ourselves within the practice in our relationship to other practitioners" (191). The insights for the academic are that practice creates both knowledge and value and that the value created comprehends the good of the community in which the practice has a history.

Understanding practical rhetoric as a matter of *conduct* rather than of production, as a matter of arguing in a prudent way toward the good of the community rather than of constructing texts, should provide some new perspectives for teachers of technical writing and developers of courses and programs in technical communication. For example, it provides a reasonable basis for the necessary combination of academic and nonacademic contributions to curriculum. If praxis creates knowledge, academics should indeed know about nonacademic practices. But the academy does not have to be just a receptacle for practices and knowledge created elsewhere. The academy itself is also a set of practices, including those of observation, conceptualization, and instruction—practices that create their own kind of knowledge. Such knowledge allows the academy to provide a standpoint for inquiry into and criticism of nonacademic practices. We ought not, in other words, simply design our courses and curricula to replicate existing practices, taking them for granted and seeking to make them more efficient on their own terms, making our students "more valuable to industry"; we ought instead to question those practices and encourage our students to do so too. Wells's "pedagogy for technical writing" suggests that we should aim "to work within the structures of technical discourse so that students can negotiate their demands but also be aware of the limited but real possibility of moving beyond them" (264). My own earlier sketch of a new pedagogy similarly suggested the need to promote both competence and critical awareness of the implications of competence ("Humanistic" 617). I might now supplement critical awareness with prudential judgment, the ability (and willingness) to take socially responsible action, including symbolic action.

An understanding of practical rhetoric as conduct provides what a techne cannot: a locus for questioning, for criticism, for distinguishing good practice from bad. That locus is not the individual or any particular set of private interests but the human community that is created through conduct; this community is the basis for practice in Bernstein's "high" sense. While the good that praxis in this higher sense creates may include the interests of individuals and industry, it is larger and more complex; the relevant community is not the working group or the corporation but the larger commu-

nity within which the corporation sells its products, pays taxes, hires employees, lobbies, issues stock, files lawsuits, and is itself held accountable to the law.

Through praxis we make ourselves and each other in interaction: Aristotle emphasizes the political dimension of this interaction, Marx the economic. But whether our everyday activities are primarily those of governing a community or those of making a living, they have both political and economic dimensions. If technical writing is the rhetoric of "the world of work," it is the rhetoric of contemporary praxis. In teaching such rhetoric, then, we acquire a measure of responsibility for political and economic conduct.

## DEVELOPING YOUR UNDERSTANDING

1. Summarize what is sometimes referred to as the "the is vs. the ought" controversy, or nonacademic professional writing practice vs. academic instruction. Identify where you stand on the controversy. In your response, examine the strengths and weaknesses of both sides.

2. Summarize the distinctions between rhetoric/writing as a productive vs. a practical art. In your summary, refer to the aims of each and the kinds of knowledge required of each. Also, compare and contrast how each perspective would affect the professional rhetor's/writer's work.

3. If we assume that professional writing should be understood as "a matter of *conduct* rather than of production, as a matter of arguing in a prudent way toward the good of the community rather than of constructing texts," explain what you believe professional writers would do at work. Refer to the following scenario to contextualize your explanation:

    You work as the communications officer for a regional environmental watchdog organization in Northern Michigan. You are the only full-time writer on the payroll, though you have one part-time staff writer and an intern from a nearby university. The organization also has a director, a financial officer, two full-time environmental scientists, and a host of volunteers.

    In the past three years, sport fishers in the region—a major tourist industry that is the pet of a state senator—have noticed a significant decrease in the size and population of various fish species. Your staff scientists' field tests have identified increased water pollutants that could be traced to several different industries upstream, but their resources and data make it hard to confirm any source.

    The organization for which you work decides that they need to initiate a communications campaign to address the problem. You begin your work by . . .

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## FOCUSING ON KEY TERMS AND CONCEPTS

Focus on the following terms and concepts while you read through this selection. Understanding these will not only increase your understanding of the selection that follows, but you will find that, because most of these terms or concepts are commonly used in professional writing and rhetoric, understanding them helps you get a better sense of the field itself.

1. invention
2. knowledge (as a verb)
3. rhetoric of persuasion
4. rhetoric of interaction