Chapter 3

A Rhetorical Toolbox for Technical and Professional Communication

When you hear the word **"rhetoric,"** you may think of the empty promises of a politician or the slanted words of a lawyer. But rhetoric has a history and set of meanings that expand well beyond such negative associations. This chapter will offer some definitions of rhetoric and then explain how technical and professional communication—especially when grounded in a service-learning approach—are inherently rhetorical. The chapter's main purposes, though, are to outline the rhetorical theory that undergirds this book and to provide you with a rhetorical toolbox for critiquing and producing technical documents. We introduce you to rhetorical terms not to bombard you with theoretical jargon, but to begin to establish a common set of concepts to guide our inventing, discussing, workshopping, drafting, and revising as communicators.

Until relatively recently in Western history, the most important part of higher education was rhetorical study. In ancient Greece and Rome, for example, the art of speaking well in civic forums about issues of communal importance was widely regarded as the most important and difficult area of study. Rhetoric involved not only learning how to speak eloquently and persuasively, but also how to speak ethically. For Isocrates, one of the first rhetoricians to establish a permanent school in ancient Greece, the goal of rhetoric was not only to persuade, but also to deliberate about and arrive at the best course of action. He taught his students to deliberate with themselves and others about the values and effects of their rhetoric.

> ". . . when anyone elects to speak or write discourses which are worthy of praise and honor, it is not conceivable that he will support causes which are unjust or petty or devoted to private quarrels, and not rather those which are great and honorable, devoted to the welfare of humanity and our common good."
>
> Isocrates, *Antidosis* 276–77

Later, Roman rhetoricians Cicero and Quintilian extended Isocrates's model, similarly describing the ideal rhetor as the good person speaking well. The Isocratean tradition of rhetorical training was, at its heart, training in active, ethical citizenship, a goal shared by proponents of service-learning.

Aristotle, roughly Isocrates's contemporary, developed what is now the most famous definition of rhetoric—*the faculty of discovering the available means of persuasion in a given situation.* This definition points to several important aspects of rhetoric (in addition to its connection to ethics).

- Rhetoric is a faculty that can be taught and developed.
- Rhetoric involves discovering and deploying persuasive discourse.
- Rhetoric is situational.

In this definition and throughout his writings on rhetoric, Aristotle emphasizes that rhetoric or persuasive discourse does not take place in a vacuum but is *context dependent.* Later in this chapter we will elaborate on the elements of the rhetorical situation or context and categorize some of the different "means of persuasion" that a rhetor can employ in response to a situation.

cal and Professional unication as Rhetoric

Technical and professional communication can be considered rhetorical in several ways. Some types of texts, such as proposals, recommendation reports, and résumés, clearly have persuasion as a primary aim; the writers of such texts attempt to persuade their audiences to accept and implement their requests, solutions, or recommendations. The letter of inquiry that you will write to a local organization, for example, will attempt to interest that organization in sponsoring a project with you. Other types of texts, such as progress reports and instructions, may primarily aim to inform or help users complete tasks. Such texts must also be persuasive, however, if only to convince their audiences that they are credible or should be followed carefully. Without misrepresenting their progress, writers of progress reports often emphasize their accomplishments to instill confidence in their readers. In addition to informing, describing, explaining, or guiding, then, technical and professional communication argues or persuades, implicitly if not explicitly.

Technical and professional communication can also be considered rhetorical because of their emphasis on audience. As Mary Lay and her coauthors of *Technical Communication* explain, technical texts combine a focus on particular subjects with a strong *audience-based orientation,* meaning such texts are "designed from the point of view of the audience and what it needs" (16). Even beyond audience-based orientation, technical and professional communication follows the principle of audience advocacy. Not only must the technical communicator fully account for the audience and its values and needs, she or he must serve as the audience's advocate, as the word *accommodate* in the definition above implies. It is the communicator's job to make information accessible and user-friendly while conforming to ethical and legal standards. Indeed, writers of documentation, instructions, and other technical and professional texts can be held legally responsible for how well they accommodate users; the written or online documentation for new products, for example, is subject to product liability laws.

Dan Jones, in *Technical Writing Style,* recommends evaluating technical communication according to ethicist Vincent Ruggiero's principle of respect for persons. From this principle, Ruggiero develops three types of ethical criteria—obligations, ideals, and consequences (Jones 241). As we have been emphasizing in this chapter and the last, technical and professional communication is often defined in terms of the obligation or duty to accommodate information to the user and help the user apply it effectively and safely. Such an obligation especially applies to writers of instructional documents, which have legal as well as ethical requirements for anticipating and accommodating users' needs. Ideals can be thought of as communally defined notions of excellence. Technical and professional writers should consider their own ideals as well as those of their organization, field, audience, and larger culture. Later in this chapter, we overview such writing-related ideals as accessibility and concision. Larger cultural ideals include honesty and efficiency. In some cases writers can positively impact the goals of the organization through sharing their values. A group of students writing for the Gainesville, Florida, chapter of Surfrider drew on their environmental knowledge and values in prompting the organization to consider expansion of its beach preservation efforts to include North Florida springs and lakes. The third ethical criterion is consequences, the harmful or beneficial effects of the communication, especially for the audience. In addition to evaluating carefully what our texts enable, this criterion requires us as communicators to consider what our texts might disable. How might the design of a website, for example, prevent users with low-end browsers from easily accessing important information? How might a community service project detract attention from another set of even more pressing needs?

Like rhetoric more generally, technical and professional communication is a situated activity, addressed to an audience and produced in response to a set of specific circumstances. For example, a local women's resource center might write a proposal to a government funding agency to obtain resources to develop a job training program, or an employee might produce a set of procedures to help coworkers streamline and standardize a data entry process. Unlike much creative and academic writing, technical and professional texts are produced for actual, concrete audiences who will use them to make decisions or perform actions. This is not to say that technical and professional communicators can always predict their audiences or that all of their texts are written to a precise, easily discernable set of readers, but often such communicators have clear ideas about who will use their texts and frequently even test their texts out on these users ahead of time (in a later chapter, we take you through the process of usability testing).

As we discussed in Chapter Two, technical and professional communication's rhetoricity—that is, its situatedness and connection to specific audiences—makes service-learning particularly well suited to it. Service-learning projects are clearly situated forms of social, rhetorical action intended to help particular audiences solve particular problems. By throwing into relief the rhetoricity of technical or professional communication, service-learning projects move past the all-too-common view of such communication as a simple set of formats and skills. Further, service-learning, with its dual emphases on critical reflection and beneficial action, can also enhance technical communication's ethical goal of deliberating about and arriving at the best course.

The rest of this chapter will introduce you to rhetorical concepts for analyzing and inventing technical and professional texts or any type of discourse. Subsequent chapters will revisit and apply the ideas below to various phases of your service-learning project. For now, we just want to give you an overview of the concepts.

> "When teachers of philosophia [e.g., rhetorical theory] make their pupils conversant with the lessons of discourse, they require them to combine in practice the particular things which they have learned, in order that they may grasp them more firmly and bring their theories into closer touch with occasions for applying them."
>
> Isocrates, *Antidosis* 184–85

'he Rhetorical ·ituation and Cultural Circuit

The most fundamental way to approach technical communication rhetorically is to account for the social and rhetorical contexts out of which it operates. To use Polanyi's terms, communicators need to step back and look at writing tasks from both focal and subsidiary perspectives as pieces and as parts of a big picture; you must pay attention to the specific design elements of your résumé, but these only make sense in relation to the qualifications of the job, your audience's expectations, and other larger-picture concerns. You may remember the concept of the rhetorical situation from earlier writing classes. Rhetorician Lloyd Bitzer has defined the *rhetorical situation* as the "context of persons, events, objects, relationships, and an exigence which strongly invites" discursive intervention (5). More simply, the rhetorical situation is the set of circumstances that calls discourse into action (2). This "calling" is what Bitzer means by the term **exigence.** Other rhetoricians have modified this concept to account for the ways communicators can *create* the need for their rhetorical intervention as well as respond to existing exigencies.

Gorgias, one of the earliest rhetoricians, defined his theory of rhetoric around exigence and the rhetor's opportune or kairotic response to it. As Sharon Crowley and Debra Hawhee explain, Gorgias's notion of **kairos**—the opportune time and/or place for deploying rhetoric—was inherently tied to the rhetorical situation (31–33). To be persuasive, a rhetor must be adept at reading the dynamics of a situation and tailoring her or his rhetoric to seize the advantage of that situation. In addition to thinking about rhetorical contexts as shaping rhetoric, we can also think of rhetoric as shaping rhetorical contexts, by, say, altering relationships or changing the stakes or influencing events. Sometimes rhetors have to make their audiences aware of a situation's exigence, and, sometimes, rhetorics must create as well as discover kairos. This might be the case for an employee writing an unsolicited proposal to solve a problem of which her coworkers and supervisors are not fully aware; she must spend more time establishing the need for her solution.

In addition to exigence, a rhetorical situation involves a **rhetor,** such as a technical writer, who responds to the situation, the rhetor's **purpose(s),** and an **audience** to whom the text is addressed. Other elements of the rhetorical situation are the **text** itself, the **subject matter,** and the larger **sociocultural contexts** that help shape the text's **production, distribution, and reception.** As Figure 3.1 shows, the rhetorical situation is often visually represented by a triangle, thus the term rhetorical triangle.

Notice how the lines of the triangle connect the elements of the rhetorical situation—writer, audience, text, and subject—forming sets of relationships.

Such relationships are also influenced by the larger contexts of the text's production, distribution, and use. Analyzing textual forms (in this case technical and professional writing) according to the recursive circuit of their production, distribution, and reception is a method developed by cultural critic Richard Johnson. The text's production is not solely determined by the writer but is also conditioned by such elements as economic constraints (e.g., the budget for reproducing and distributing a newsletter) and institutional pressures (e.g., a deadline imposed by a supervisor). Accounting for the text's distribution means accounting for the avenues through which it reaches and circulates among its readers and not just its form. If you produce a website for an organization, for example, you'll want to register it with search engines and link it to other sites visited by your targeted viewers. Analyzing the reception of the text involves analyzing the various factors that help shape its use, from the material environment to the readers' attitudes toward it.

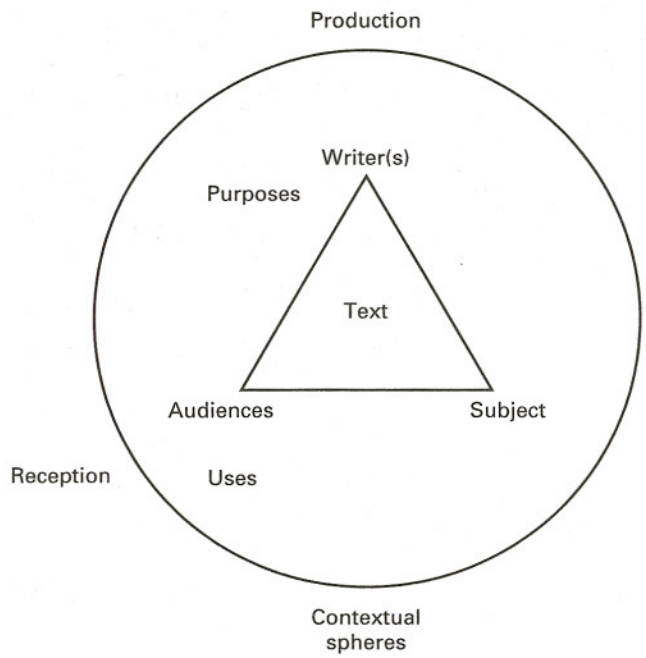

Figure 3.1 Core elements of the rhetorical situation

In the rest of this section we will expand on our explanation of the elements of the rhetorical situation and cultural circuit, ending with a set of questions to guide your invention and analysis of technical texts. We will illustrate our explanation with an extended example of a service-learning project by a class of professional writing students at Penn State. In this class the students worked with a staff member from the University Health Center to produce a set of brochures informing students about sexually transmitted diseases (STDs) and the center's prevention and treatment services.

Writers and Their Roles

Most workplace communication is not the product of only one writer, but a group of writers and other collaborators. Online documentation, for instance, might be produced by a team of writers, graphic specialists, and software developers. It follows, then, that authors of workplace texts represent not only themselves, but also the larger organizations for which they work. Indeed, many documents are identified only by the organization's name, and others are written for the signature of a supervisor. The corporate-based representation of technical communication has been described as one of its defining characteristics (Lay et al.). Writers must develop collaborative skills, clarify whom they represent, and understand the ethos or projected identity of the organization.

One of the most important steps in assessing a rhetorical situation is defining your role as a professional and writer. This role can be determined by a number of factors, including your job responsibilities, relationships with coworkers and supervisors, and, perhaps most importantly, relationships with the audience (see Couture and Rymer). The concept of a **discourse community** can help us think about some of these communicative relationships. A discourse community can be defined as a group of people bound by a common interest who share and regulate specialized kinds of knowledge and ways of communicating (see Porter; Anson and Forsberg 202). Discourse communities can range in scope from, say, people working on a particular project to supervisors and workers in an organization to an entire field or interest group. Discourse communities are not made up of people with equal power, but are networks of relationships among regulators or supervisors, communicators, and consumers.

> "What came to mind as I read about discourse communities is the comparison between the students in my English classes and those in my education classes. While I sometimes feel like a fish out of water in my English class, I feel confident and able to discuss all the topics in the education classes. Instead of having to reread passages to make sense of them, I can usually skim my education readings because I am so used to the conventions and phraseology."
>
> Lynn, Professional Writing Student

It is not always easy to juggle your multiple roles; your individual perspective might be different from that of the rest of the group, for example, or you may need to mediate between the needs of your audience and the expectations of your supervisors. In such instances you should consider your ethical obligations as well as the power dynamics involved.

In the case of the STD brochures, the team of writers was led by the staff member but also included several students who were not part of the center's health care discourse community. The roles of the students were mainly to assist in the research, writing, and design of the brochures and to test the brochures on a sample user group of fellow students. The staff member guided and oversaw the students' work, and a group of other health care professionals evaluated the final versions. Because the students were closer to members of the target audience than their agency collaborators, their perspectives on language and design were particularly useful. They functioned, in part, as representatives of the audience's discourse community on the writing team.

Writers' and Organization's Purposes

In technical or professional writing, you'll need to consider the purposes of your supervisor and the larger organization as well as your own. Purposes are sometimes conceptualized as objectives or as specific, measurable outcomes that you want your text to achieve. How do you want your readers to respond to your text? What do you want them to do with it or based on it? What kind of relationship with your readers do you want to foster? What kind of impression do you want to make of yourself and your organization? As students, you'll probably have the academic objective of earning a good grade. In our experience with service-learning projects, however, this purpose often takes a back seat to more community-oriented ones.

In some situations, like the one the STD brochure writers faced, your aims and purposes are mostly determined for you, and in others you may start with general aims (e.g., persuasive, informative, instructional) but need to develop more specific purposes tied to readers' responses and actions. It can be helpful to designate which purposes are primary and which ones are secondary. The brochure writers' aims were primarily informative but also persuasive; they sought to provide at-risk students with basic information about risk assessment, prevention, testing, and treatment and also to persuade these students to take action based on this information, by, say, assessing their health, making an appointment at the center or implementing preventive measures.

Audience: Background, Needs, Values, and Uses

One of the most important elements of any rhetorical situation is the relationship between the communicator(s) and **audience.** To discover the available means of persuasion and to make your text accommodating, you will need to carefully consider your relationship with your audience. If you have an established relationship with your audience, for example, you might be able to write in a less formal tone. You will likely take greater care in persuading a potential client than a coworker, a hostile audience than a friendly one. Just as you consider your roles as a writer in a rhetorical situation, you should also consider your audience's roles. You can start by determining your audience's roles in their organizations and their likely uses of the text. In many professional communication situations, such as those involving readers of empirical reports or users of instructions, the readers are primarily learners and/or implementers. In others they may be decision makers who want the bottom line or advisors who want supplementary information as well. You will also want to consider the audience's familiarity with the subject (the audience-subject relation), needs, values, expectations, and motivation to use the text.

The first, most powerful audience the brochure writers faced was the health center staff who supervised and decided whether or not to approve the brochures. The writers had to meet this audience's specifications for the text and timeline and budget for the project. The ultimate audience, though, was of course the clients who would receive the brochures if they were approved and used. To achieve their purposes, the writers needed to ask how much the target audience of at-risk students knew about STDs and the center's resources regarding them, and how motivated the audience would likely be to read and use the brochures. Asking such questions helped the writers determine what kind of information to present and how to present it in the most accessible and persuasive way. As students themselves, some of the writers were in a good position to begin to analyze the target audience, even though the audience was probably more heterogeneous and less easy to predict than we have implied from our discussion so far. In such a case it might be useful to consider Andrea Lunsford and Lisa Ede's distinction between *audience invoked*—the audience the writers call to and, in a sense, help shape through the language and design of the text—and *audience addressed*—the actual readers who encounter and use the text. Although technical writers can invoke an audience based on a thorough analysis of, and even input from, potential readers, the audience addressed is almost always more complex. It would be difficult to determine to whom clients of the health center might pass the brochures after they leave the clinic.

Communicators often have secondary audiences along with a primary one. In hypothesizing who might comprise these secondary groups of readers, it is sometimes helpful to think through the life cycle of the text, its avenues of distribution and circulation. In what sites will the text be made available, and who is likely to encounter the text in these sites? Returning to the multiple purposes of the text can also help you brainstorm who the secondary audiences might be. Because the brochures are needed, in part, to aid health care providers at the center in explaining STDs and providing clients with supplementary information, these same health care providers constitute a secondary audience. Sexually active undergraduate students are not the only patrons of the health center; other audiences might include undergraduate students who are not at risk for STDs, graduate students, and even faculty members, although these audiences are less crucial.

"I am in full agreement with the line, 'Although technical writers can invoke an audience based on a thorough analysis of and even input from potential readers, the audience addressed is almost always more complex.' When I write a proposal or other project at work, it is very hard to pinpoint exactly who will be looking at my work once it is sent out. The possibilities range from government officials, clinicians, and judges to a diverse group of people on a proposal evaluation committee.

When writing these proposals I try my hardest (and sometimes fail) to think of all the possible routes my words will take once they leave the office. Often, wondering who will be part of my secondary audience can be frustrating."
Gloria, Technical Writing Student

Text

The purposes, audiences, and uses of a document will help determine another component of the rhetorical situation—the **text** itself. As the users' advocate, you will need to tailor the text's medium and its form to the expectations of those users. The medium of the communication can be an oral presentation, print document, website or other online text, or even a multimedia text. Different people have different amounts of experience and levels of comfort with different media; users of an advanced software program, for example, may not need extensive printed documentation; new users may need several sets of instructions to complete a complex task.

Technical and professional texts typically follow general conventions of particular genres, such as empirical reports, instructions, and fact sheets. The conventions of instructions, for example, include chronological, numbered steps written in imperative voice, action-view drawings or photographs showing the steps, and troubleshooting advice. Readers of a proposal will expect the text to include a discussion of the problem, description of methods and solution, and outline of schedule and costs. In subsequent chapters we will introduce you to several common professional genres, including the letter of inquiry, proposal, progress report, and evaluation report. Following rhetorician Carolyn Miller, we find it useful to think of genres as forms of social action rather than rigid formats. Communicators follow the conventions of particular genres not simply to conform to rules or standards, but to fulfill their audiences' expectations and to enable their readers to better follow and act on the information in their texts.

Beyond generic conventions, which span across discourse communities, you'll need to adapt your text to the more specific conventions of the discourse communities you're representing and addressing. What kinds of graphics and what style does your organization use in its brochures? What form (e.g., poster, booklet, notecards, etc.) will your readers expect your instructions to take? We'll give you more heuristics for analyzing and formulating such discourse conventions in Chapter Seven.

The writers of the STD documents decided to use a fact-sheet-type of brochure—a common genre for conveying general information to patients—to motivate readers through powerful and concise statements and to make it easier for them to take the text with them. They needed to consider, then, existing brochures' language and design conventions, such as basic drawings instead of photographs, small chunks of texts and bulleted lists, a simple color scheme, and a straightforward but user-friendly style. The writers' design of the brochures was constrained by other institutional factors, too, such as the cost of reproducing the brochures and the need to include standard university information (the center used a template for the front and back covers). One student group also learned the importance of considering the values of their sponsors and discourse community (in this case health care workers) when some of their visuals were rejected for portraying clients as cartoon characters; the sponsors explained that such images can be disrespectful by trivializing clients and their problems.

Subject

As the figure of the rhetorical triangle shows, the **subject** is another core element of the rhetorical situation. Technical communicators must determine what they know about the subject as well as what the audience knows or needs to know about it. The writers of a progress report, for example, should consider how much background information the audience will need to remind them of the project. Technical communicators often try to determine the questions their audience will likely have about the subject. Many manuals and other technical texts are even arranged around reader-centered headings in the form of questions. The audience's knowledge, expectations, and needs regarding the subject are factors that help shape the text. Writers have to make decisions about considerations such as how much information to present, what information to give the most presence or emphasis, and how to arrange the information for maximum accessibility.

Larger Sociocultural Contexts of Production, Distribution, and Reception

All of the above elements are embedded in a larger set of circumstances—we might call them spheres—that both create exigence for and put constraints on the cycle of communication. Writers can begin to analyze contexts by thinking through the problems that invite their intervention. In the case of the brochures, the general problem was the increasing incidence of STDs among college-age students. The center's local problem was its lack of print materials to inform students about STDs and how to prevent them; the health care providers did not have any print materials about STDs to give students when they visited. You can also think of contexts as the larger networks of interpretation and material conditions that influence how your texts can be produced, distributed, and received.

In addition to more immediate situational factors, such as the health center's institutional requirements and the settings in which clients will read the brochures, larger cultural influences form a contextual sphere that influences the rhetorical act. By culture, we mean socially constructed behaviors, values, and conditions. Examples of larger cultural concerns include business customs, gender roles, ethical norms, and economic conditions. An audience's values are certainly conditioned by broader cultural norms. Awareness of cultural elements is becoming increasingly important as communication becomes more global. Service-learning technical and professional writing projects associated with local service organizations must also account for the cultural elements of the communities they serve, however. The brochure writers will need to consider norms and patterns relating to sex and dating when they discuss prevention strategies. They will even need to consider the various associations of specific terms and concepts (e.g., *safer sex*), as their audience will interpret the brochures within a broader network of cultural messages about STDs.

Invention Questions

Our overall message has been that the technical or professional communicator must consider the interconnected elements and relationships of the situation at hand. The following questions synthesize the concerns we've been discussing, providing a compact heuristic for rhetorically analyzing your assigned texts. We suggest that you mark this page as you will likely return to it to guide your invention for each assignment. As you apply these questions more and more, thinking rhetorically should gradually become second nature to you.

Writer

- What are your roles and responsibilities?
- Who are the other members of the writing team, and what are their roles?
- Whom will the text represent? Within what discourse community are you writing?
- What is your relationship to the audience? How well do you know the audience? What is your audience's attitude toward you?
- What are your primary and secondary aims and purposes? What do you want to accomplish with the text? What do you want readers to do in response?

Audience

- Who is your primary target audience? How complex and heterogeneous is this audience? Who else is likely to encounter and use the text in its life cycle?
- What are the roles of your readers? Are they primarily learners, implementers, decision makers, transmitters, advisors, or some combination of these?
- Of what discourse communities are your readers members?
- How much knowledge does your audience have about the subject and text? How familiar is the audience with the problem?
- What are your audience's needs regarding the problem?
- What expectations will your audience have for the text?
- What values of your audience might help shape their attitude toward, and interpretation of, the text? How can you appeal to these values?

- How motivated will your audience be to read and use the text? How can you increase this motivation?
- How is your audience likely to use the text?

Text and Subject

- What medium and genre are best suited to the purposes, audiences, and uses of the text? What form best enables you to reach your audience and make the information accessible to them?
- How much experience and comfort will the audience have with the medium and the genre?
- To what generic and discourse community conventions should you conform? How familiar will the readers be with these conventions?
- How is the text related to other texts?
- What do you know about the subject?
- What does your audience know? What questions will your audience likely have? What will their attitude likely be?

Contextual Spheres of Production, Distribution, and Reception

- What is the exigence of the situation? What aspects of the situation invite your intervention?
- What technical and institutional problems will the text help solve?
- What are the institutional constraints to which you and the text must conform?
- What would a diagram of the text's life cycle look like?
- In what environments will your audience interpret and use the text?
- What cultural norms, patterns of behavior, and other conditions will affect the audience's interpretation of the text? How can you accommodate these?

We now turn from the fundamental rhetorical concept of the rhetorical situation to a discussion of the main "means of persuasion" that technical and professional communicators can deploy in particular situations.

Rhetorical Appeals

In *On Rhetoric,* Aristotle describes three general types of persuasive appeals or means of persuasion—**logos, pathos, and ethos.** Ethos appeals relate to the writer's credibility and character; pathos appeals address the audience's values and emotions; logos appeals present the reasoning or the logic of the argument. These appeals sometimes overlap; for example, a well-reasoned argument usually increases the writer's credibility, or an ethical appeal to goodwill might play on an audience's emotions.

> "Of the *pisteis* [rhetorical proofs or appeals] provided through speech there are three species: for some are in the character [ethos] of the speaker, and some in disposing the listener in some way [pathos], and some in the argument [logos] itself, by showing or seeming to show something."
>
> Aristotle, *On Rhetoric* 37

Ethos

For Isocrates, Aristotle, and other ancient rhetoricians, ethos was the most important of the three appeals. They recognized that the communicator's character and credibility go a long way toward persuading an audience. Ethos is particularly important for technical and professional communicators because they often represent their superiors and the company or organization as well as themselves. Such communicators must carefully attend to the organization's ethos, the character the organization adopts in its communications with people outside and inside the organization (Lay et al. 117). Aristotle described ethos as something like persona, the character a writer projects in the text. We might call this the *invented ethos*—the writer invents it through the act of communication. Isocrates, Cicero, and other ancients conceptualized ethos more broadly, as both the invented ethos and the character or reputation the writer brings with her or him. We'll call this latter aspect the *situated ethos.*

In a past service-learning project, a group of students worked with United Way personnel to revise and redesign a fundraising packet that targeted corporations. These students had to discern the organizational ethos of United Way by studying other texts directed toward corporate donors. Because United Way is a well-known, well-respected social service agency and had already established connections with many corporations, the writers came into the situation with a familiar and positive situated ethos. For some readers, however, they could not rely on this reputation alone. The writers also had to establish credibility and goodwill in the packet by explaining how donations would be used, by explaining how a donation would benefit the corporation, and by other means.

As the Roman rhetorician Cicero explained, one way for rhetors to establish a positive, persuasive ethos is by demonstrating that they are knowledgeable and have done their homework about the issue. This is especially important when they don't come into a situation with already-established credentials. Communicators can establish credibility for themselves in several ways:

- by showing that they understand the audience's problem and have carefully arrived at a solution
- by demonstrating their expertise on the subject
- by citing other authorities on the subject
- by presenting the text in a polished manner, as this implies that the writers are careful and professional
- by avoiding grammatical and mechanical mistakes that might distract from the text's persuasiveness (not to mention comprehension).

A second, related ethos-building strategy Cicero discussed was showing goodwill toward the audience. Of course technical and professional communicators already have an obligation to accommodate readers' needs. Accessibility can serve the persuasive aim as well as the informative one. If readers of instructions have to flip back and forth to find needed visuals, for example, they might become less motivated or even irritated. Although the United Way corporate packet contained a substantial amount of information, it was arranged so that readers could easily find and retrieve small pieces of that information, such as a list of the former year's contributors. Goodwill can also be created through tone and voice. A professional yet friendly tone will generally be persuasive in workplace situations, although a more formal tone might be in order for supervisory or client audiences the writer doesn't know well. First and second person closes the rhetorical distance between the writers and audience, which can be reassuring to users in a text such as an online tutorial. The United Way writers used first and second person to help convey a sense of partnership between the agency and contributing corporations.

Pathos

Pathos—the appeal to the audience's values or emotions—is a second general type of appeal. Although you may think of emotional appeals as being inappropriate for technical and professional communication, this is often not the case. Audiences often are emotionally invested in the problems technical and professional documents address. Emotional appeals can be used to establish a bond with an audience, create goodwill toward an audience (a connection to ethos), or help ensure the safety of an audience. Humor might be used to reassure and motivate the users of an online tutorial, for example. Appeals to fear, in the form of warning or danger callouts, might be appropriate for users of certain instructions. Because they are often read first and are read holistically, visual aids can carry enhanced pathos appeals.

In addition, audiences interpret and evaluate texts according to a network of values. Evaluators of proposals, for example, might assess how well the proposed solutions embody the values of the funding organization. A personnel manager might look for references to the company's values in a job applicant's materials. In our student example, the writers of the corporate fundraising packet emphasized United Way's careful management of donated funds as well as the benefits for the company and the community of donating, thereby appealing to the value of positive local public relationships. Another group of students who were producing a brochure for a student-run charity dance-a-thon appealed to their audience's sense of fun and community by including photographs of past volunteers dancing in one large group and also celebrating their fundraising achievement with children who benefited from it.

Because they can be so powerful, pathos appeals should be used with care. If not suited to the rhetorical situation and not crafted carefully, appeals to emotions and values can alienate or anger audiences. The excessive use of pathos appeals may make some audiences distrustful and thus may detract from your ethos. You can prevent such rhetorical mishaps by using pathos appeals to strengthen logos and ethos appeals and by basing your appeals on careful audience analysis (and even testing) rather than on hasty assumptions about an audience. Determine the kinds of appeals that are most valued by your audiences. The writers of the corporate fundraising packet could not rely solely on emotionally touching photographs and quotations from community members who had benefited from United Way services. They instead used these means of persuasion to supplement a credible ethos and a set of well-supported reasons.

Logos

The third means of persuasion discussed by Aristotle and other early rhetoricians is logos or the appeal to reasoning. We discussed earlier that all technical and professional communication has at least a secondary persuasive aim; it follows, then, that all such texts make some kind of argument, whether or not the argument is overt. The basic elements of an argument are a claim, reasons, premises, and evidence. Some of these elements, such as a premise or even the claim itself, may be implicit if they are already clear or already accepted by the audience.

The key to an effective argument is persuasive, well-supported reasons. You can think of reasons as the because clauses that follow your claim (Lay et al. 120). For example, the company should hire you *because* you have leadership skills and extensive experience, or the agency should fund your proposal *because* your team has the cheapest solution and the most feasible management plan. Sometimes the reasons are related to pathos and ethos appeals: Hire me because I share the values of your company, or fund our proposal because we are the most capable, reputable engineering firm. It is important to remember that it is the audience, and not the writer(s), who assesses the persuasiveness of the reasons.

If an audience readily agrees with a reason, it may not need further support. Most reasons, however, need to be backed up with some type of evidence. Just as reasons support a claim, evidence supports or backs up reasons. Evidence can take the form of examples, data, and testimony from others. Rhetors should assess the types of evidence that their audiences will find most credible and make sure that the evidence they provide is both relevant and sufficient. The proposal team that argues that its solution is the best because it is the most feasible will undoubtedly need to provide evidence of this feasibility, such as an explanation of methods, a projection of the schedule, and a detailed description of costs.

Reasons are linked to a claim by what we are calling premises, which are basically the assumptions the audience must accept to move from the claim to the reasons, to follow the logical connection between the two elements. A résumé writer who argues that the company should hire her based on her formal training is hoping that her audience will accept the assumption that this training taught her skills relevant to the job. Like reasons, premises sometimes need support and sometimes do not. Depending on the audience, the job applicant might need to articulate reasons *why* her training would be relevant to the job and beneficial to the company.

Understanding the parts of an argument and how they work together to form a logos appeal can enable communicators to critique and shore up their own arguments better, especially when they are directed to skeptical audiences. The students writing for United Way conceptualized their corporate fundraising packet as an argument that needed good reasons and evidence, and their packet was the more persuasive for it. Their major claim that the corporation should contribute to United Way was supported by pathos-inflected reasons about the benefits of contributing to the corporation and the larger community. These reasons were, in turn, supported by an array of evidence, including quantitative data about the agency's budget and expenditures, descriptions of the other agencies and specific projects that United Way supports, and testimony from the recipients of community programs. A less obvious reason included in the packet (and fortified by a list) was that many other important corporations donated funds to United Way. For the most part, the writers did not need to provide backing for their premises or assumptions, as they were careful to include reasons in line with the audiences' values.

In the next section, we move from discussing means of persuasion to explaining a rhetorical system for analyzing one part of the rhetorical situation—the text itself.

he Five Canons

Classical rhetoricians identified five related canons or constituent parts of rhetoric—invention, arrangement, style, memory, and delivery (see Figure 3.2).

Taken together, the five canons compose a heuristic for analyzing the production and reception of any text. Although early rhetoricians used the canons to analyze oral discourse, we can adapt them for written and electronic discourse as well. As the following sections will explain and the figure below shows, the five canons

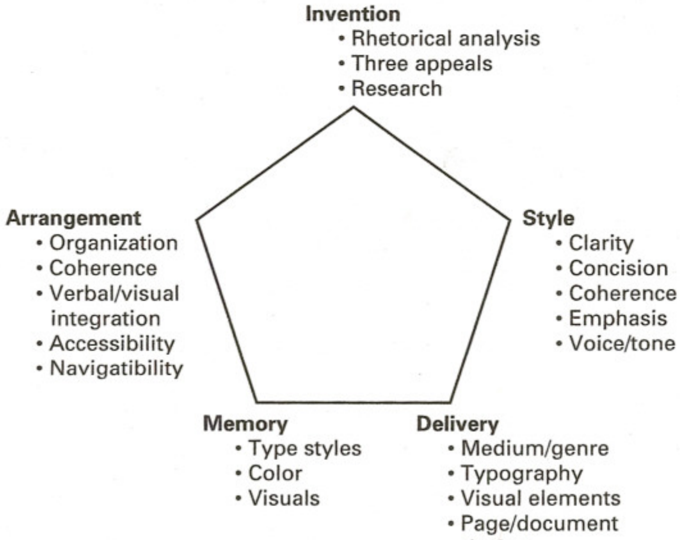

Figure 3.2 The five canons of classical rhetoric and their textual components

are interconnected and sometimes overlapping. A text's arrangement, for example, can affect its memorableness. We separate them in our discussion, however, to enable more systematic analysis of the rhetorical dimensions of a technical text.

> "Since all the business and art of orators is divided into five parts, they ought first to find out what they should say [invention]; next, to dispose and arrange their matter, not only in a certain order, but with a sort of power and judgment; then to clothe and deck their thoughts with language [style]; then to secure them in their [and their audience's] memory; and, lastly, to deliver them with dignity and grace."
> Cicero, *On the Character of the Orator* 40–41

Invention

The first canon of rhetoric, **invention** is often defined similarly to rhetoric itself as the discovery of the available and appropriate means of persuasion in a situation. You may associate invention with the prewriting step in the writing process; yet, this latter term falsely implies that the writing process is linear and that invention takes place only at its beginning. Rhetors invent throughout the act of communication, of course, from the first consideration of the rhetorical situation to the final round of editing.

We will not go into much detail about invention here, as the previous sections on the rhetorical situation and three main types of appeals have covered this canon. The most helpful invention strategy, we maintain, is analyzing your exigence, purposes, audiences, uses, and contextual constraints. In relating the canon of invention to technical and professional communication, some rhetoricians have emphasized not only the appropriateness of one's arguments, but also the sufficiency and relevance of the information one presents (Dragga and Gong 31). But these considerations also depend on one's audience and other elements of the rhetorical situation. Sufficiency and relevance are determined largely by one's readers. How much information will readers need to be persuaded? How well does the information meet their expectations? How well does the information match their values?

Arrangement

Arrangement refers to the selection and organization of a text's parts, both verbal and visual. You might also associate it with the words *structure* and *form*. We can think of arrangement on several different levels: the arrangement of words and sentences, the arrangement of paragraphs or sections, and the overall arrangement of the entire document. Within this latter aspect, we can consider page and document design as well as the verbal–visual relationship in a text. Our discussion of arrangement will focus on several crucial aspects of the canon: organization, document-level coherence, verbal–visual integration, and accessibility/navigatibility.

Organization The organization of most technical texts is deductive and top-down; that is, it leads with the most important information (such as conclusions) and previews the structure of the text. This straightforward type of arrangement makes sense for busy readers who want the bottom line, need to locate a particular piece of information, or even need to determine whether the document is of interest. In what is sometimes called a managerial arrangement, many reports preview the conclusion(s) and recommendation(s) up front. The introductory summaries of proposals frequently preview the scope, major parts, and overall cost of the proposed solution. Letters of inquiry typically indicate what the writer is requesting within the first couple of sentences. Not all situations call for a deductive, top-down organization, however. When delivering bad news or making a controversial argument, writers may want to, respectively, buffer the bad news with good news or begin by building the audience's trust. Writers should have good reasons for violating the common expectation of a deductive organization. If a writer has setbacks to discuss in a progress report, for example, he may not want to preview these in the beginning.

The overall organization of the text can be sequential, categorical, or a combination of these. **Sequential** patterns of organization include spatial, chronological, and hierarchical, and are usually easier for the audience to discern and predict (Dragga and Gong 49). Most readers of technical product descriptions will likely expect the descriptions to progress spatially in a single direction. Instructions, procedures, and progress reports are among genres that typically follow a chronological organization. Recommendation reports are typically written hierarchically, meaning that the recommendations are listed in either ascending or descending order (Dragga and Gong 50). Numbered (as opposed to bulleted) lists can indicate such a hierarchy.

Compared to these sequential patterns, **categorical** patterns of organization make it more difficult for readers to predict information, although some genres of technical texts are often organized around standard categories. Empirical reports, for example, typically follow the structure of introduction, methods, results, discussion, and conclusions. Organizational categories can be formed out of the subject matter of the text as well as its generic conventions. The links on the homepage of a company or university website are examples of subject-based categories.

Finally, some technical texts combine sequential and categorical principles of organization. A progress report might be organized primarily around the sequence of past work, present work, and future work, while the items under each of these headings may be organized according to specific parts of the project. Because they are often subject oriented and harder to follow, categorical arrangements should be used with the audience in mind. What categories will readers expect and most readily recognize? How can you make the pattern of categories clearer to readers?

Coherence **Coherence** might be defined as the logical flow and consistency of a text's arrangement. The arrangement of a coherent text not only flows smoothly and logically from one part to the next, but also "hangs together," to borrow a phrase from *Style: Ten Lessons in Clarity and Grace* by Joseph Williams. Readers must be able to identify the logical thread of ideas in a text. We can connect coherence to rhetorician Kenneth Burke's audience-based definition of *form* as the creation and fulfillment of desire. A text has form, Burke explains, insofar as it causes readers to expect and desire a sequence and then gratifies them with that sequence (124). Creating this form is especially important for proposals and other texts that depend on a particular argumentative sequence. Proposal readers need to see the logical progression from and connection among the problem, objectives, and solution. Tight coherence is less important for nonlinear texts such as organizational websites, although even these sites direct the flow of information in a limited number of directions.

Writers can create document-level coherence in several ways, most importantly by forecasting the structure of a text, arranging the blocks of information in a logical progression (sequential or categorical), and including transitional sentences between blocks of information. Coherence can also be an important criterion for deciding where to include visuals in a text and whether to include certain information in the main text or in an appendix. You don't want to make users flip back and forth between the verbal and visual components of a text, and you don't want supplementary information to detract from the text's flow.

Coherence is also a document design issue, especially for nonlinear professional and technical texts such as newsletters or organizational websites. Readers of such texts need to see how the multiple parts of the text work together, even if they are exploring or looking for particular pieces of information, and design features can clarify this. Well-designed websites, for example, create coherence by clearly indicating whether the user has left the site and by providing the reader with a consistent set of navigational aids.

Verbal–Visual Integration Integrating visual and verbal elements is an important step in creating cohesion or a sense of unity. Visuals that do not cohere with the rest of the text can confuse rather than help users. In general, visuals should be placed near the blocks of text that discuss them, as with instructions that place action-view drawings directly beside or below the steps they illustrate. In Chapter Seven we take you through the process of creating a visual blueprint of your document's layout, which can help ensure such coordination. Visuals can also be smoothly integrated through a three-step process of introducing them, explaining them, and helping readers draw conclusions from them (Anderson 295–96). Instead of simply placing tables or figures in a text and letting them speak for themselves, experienced technical communicators usually refer to them (e.g., "As Figure 1.3 illustrates . . .") and then help readers interpret them, pointing readers to specific parts of the visuals and emphasizing their main messages. This process may seem somewhat redundant, but it can clarify visuals and give users multiple ways to access the information.

Accessibility One of the most important concepts in technical and professional communication is **accessibility,** as this concept goes to the heart of the technical communicator's job to accommodate users. Unlike the readers of a novel, most readers of a workplace text do not read the text in its entirety from beginning to end. Instead, they read selectively and strategically to solve a problem or to find information or to perform a task. As Janice Redish and her colleagues at the American Institute for Research explain, most technical texts are written for "busy people who want to get in, get what they need, and get out of the document as quickly as possible" (131). Thus **retrievability** is also important. Think about the last time you looked in a manual or visited a website or read a memo or brochure: You probably skimmed the text and looked only for the information you wanted or needed at that particular moment. Therefore, you wanted that information to be easy to access and retrieve.

To make matters even more complicated, workplace texts often have multiple audiences who have different needs and interests. Therefore, professional communicators need to make different pathways of information accessible to different audiences. This is one way in which redundancy can be functional. A report may repeat some of the same information in the executive summary and introduction, but this is because some readers will only read one or the other.

Making a text accessible starts with arranging it from the readers' point of view, which you can begin to determine from your analysis of their questions, needs, uses, and so on. More specifically, making a text accessible involves previewing its contents, setting up signposts with headings, and making the organization of parts visually explicit (Redish et al. 145). Learning how to preview a text is one of the most important skills a communicator can learn. In correspondence, a good subject line can preview what the text is about. In line with their deductive organizations, the introductions of most technical and professional texts (from reports to proposals to instructions) typically include a **purpose statement** and a **forecasting element.** A purpose statement tells readers what the text is intended to do for them and often begins something like, "The purpose of this report is. . . ." Some purpose statements also tell readers how to approach and use the text. A forecasting element, which can be in the form of a sentence or a list, tells readers what the text will cover and usually previews the major parts of the text, which are also indicated by the major headings. Some technical texts combine the purpose statement and the forecasting element, as in the following example:

> "This tutorial is intended to guide the novice user through the process of designing a basic web page, from naming the page to adding text, links, and visuals, and color."

A longer document can benefit from such forecasting not only in the overall introduction, but also in the introduction to each major section. You'll see such sectional forecasting elements in most of the proposals and longer reports in the appendixes.

Arranging the text around headings and subheadings is another way to make it accessible. Although headings should not substitute for transitional statements in creating coherence, they can help guide readers through a text or locate a needed piece of information. Headings should be carefully crafted, however, to be both reader based and informative. Some headings are even written in the form of readers' questions. Vague headings can be worse than no headings at all, frustrating readers or causing them to overlook important information. Even headings that reflect the standard sections of a genre, such as "results" or "management plan" can be crafted to inform readers about the specific information covered. Another danger with headings is having too many levels of them; usually three levels is sufficient even for a longer document.

One way to make the arrangement of the text visually apparent is by making the headings stand out through such techniques as bolding, underlining, or capitalizing them. Blank space can also be used to visually separate sections. When using visual markers such as headings or blank space, be consistent and follow conventions (sometimes prescribed by style guides). All headings of the same level should look the same, and major headings should stand out more than minor ones.

Beyond previewing and signposting the sections of a document, technical and professional communicators deploy a variety of strategies to make the information in these sections more accessible. These strategies include:

- formatting text in bulleted or numbered lists
- breaking up text into short, manageable paragraphs
- using blank space to create blocks of information and guide the reader through them
- placing the most important information in the beginnings or ends of paragraphs.

You will utilize all of these strategies when you design your résumé for the next chapter.

In web-based documents, accessibility might be thought of in terms of **navigability.** In addition to finding and retrieving information, navigation involves moving through it in a strategic way to make connections. In general, hypertext documents are more dynamic than print ones; that is to say, users help shape the arrangement through the hyperlinks and pathways they follow. Although some hypertext documents, such as web tutorials, guide readers along a mostly linear pathway, others enable more varied reading movement. This potential for variation makes hypertext a good medium for texts with multiple audiences. Online documentation, for example, often provides differing pathways of help for experienced users and novice users.

As a creator of hypertext, it is important to remember that your arrangement of each screen and of the overall network of links makes certain pathways possible and others not possible. Because readers' navigation of hypertext is harder to predict than their navigation of a traditional print document, user testing may prove to be especially helpful. Students in one service-learning professional writing course performed user testing of the university computing center's website to determine how easy it was to navigate the site and to locate specific information within it. They then sent the center short reports describing their tests, outlining their findings, and recommending specific changes to the site.

To aid navigation across web pages, hypertext designers often include a frame or a table with the site's major headings and links on each page. This can also help users determine whether they have left the site. Other navigation-aiding techniques include arranging information to minimize the audience's horizontal and vertical scrolling, placing anchors to help readers quickly move from one part of a page to another, and creating multiple links to the same information. Headings, blank space, lists, and other techniques can increase the accessibility of hypertext as well as print documents.

Style

Style, the third canon of rhetoric, can be generally defined as the expression of a text shaped by word choice and sentence composition. It includes such aspects of the text as its clarity or readability, coherence, register, and tone. You may think of a technical style as fairly formal, objective, and full of jargon. But technical and professional style is as varied as the documents it is used to create. Appropriate style depends on a number of rhetorical elements, including the purpose, subject, type of communication (e.g., email or formal report), institutional conventions, and, most importantly, writer–reader relationship. The closer and more established the relationship, for example, the less formal the style probably needs to be. We can point to certain characteristics of style that most workplace audiences value and expect, however, based on their positions as busy, task-oriented users; these include clarity, active style, concision, coherence, and emphasis.

As a reader of instructions, reports, and correspondence yourself, you have probably noticed that these types of texts are more straightforward and concise than, say, novels, academic journal articles, or even some textbooks. **Clarity** refers to the readability and understandability of a text. A clear style enables readers to follow, understand, and use the information more easily. In *Style: Ten Lessons in Clarity and Grace,* Joseph Williams discusses clarity in terms of the actors and action in a sentence. Clarity is closely related to **active style,** our style focus in Chapter Eight. Williams advises writers to, whenever possible, make a sentence's subject an agent of action and a sentence's verb an expression of that action. Consider the following example:

> "The proposal meticulously followed the guidelines of the request for proposals (RFP)."

as opposed to,

> "The guidelines of the RFP were meticulously followed."

Action-oriented sentences are easier to comprehend and can also be more energetic and efficient. This is why technical and professional writers should consider focusing on the verb fairly quickly in the sentence, avoiding weak verbs such as *is* and *has,* and avoiding expletives or sentences that begin with "There are . . ." and "It is . . ." In addition, unless they have a good reason to use the passive voice (e.g., the actor in the sentence is not important), writers should use active voice, as this type of construction follows the abovementioned actor–action pattern and is therefore clearer.

We have found from our teaching experience that most students err on the side of wordiness rather than **concision,** often because they are trying to sound authoritative or are paying more attention to the subject matter than the audience. Ironically, a wordy text is more likely to detract from the writer's ethos than boost it. In addition to using active voice, writers can work toward concision by identifying and deleting meaningless or unnecessarily redundant words, replacing phrases with synonymous words, and combining short, related sentences. Although workplace texts should usually be concise, they should not be so concise that they seem overly simplistic (and thus insulting) or dull. Using various sentence structures from simple to compound–complex can make the style of a text more engaging and interesting. We elaborate on concision in the next chapter.

Sentence-level coherence is an important stylistic goal. Choppy, confusing, or otherwise incoherent prose can irritate readers or cause them to stop reading. An executive evaluating a proposal may dismiss it if she has to work too hard to follow the argument. A novice user may not be able to complete a task if the instructions are confusing or require constant rereading. In *Rhetorical Grammar*, Martha Kolln describes stylistic coherence in terms of a contract between the writer and reader(s). The writer has an obligation or contract, Kolln explains, to fulfill the reader's expectation that each sentence be connected to what has gone before (44). As we discussed in the section on arrangement, coherence requires that the parts of a text hang together as well as flow. This does not necessarily mean that all the sentences in a text or passage should create a completely unified whole, but that the sentences should work together to create larger topical patterns that readers can easily discern.

Coherence, or logical flow of thought, can be improved on the sentence level by using several techniques, which we will suggest that you apply to your project proposal in Chapter Five:

- creating given–new information chains
- using transitional words and phrases
- repeating key words or phrases
- ensuring that the progression of sentences makes logical sense
- maintaining a sense of focus among a group of connected sentences.

In a given–new information chain, a sentence will begin with a word or idea that ended the previous sentence; this enables the reader to enter the new sentence on more familiar ground and to assimilate more easily the new idea into her frame of reference. Transitional words and phrases can show relationship between sentences, though they should not substitute for linkages in meaning. Writers can rely too heavily on transitional elements and other cues to create coherence that should also be apparent from the progression of ideas. You may have read passages that include transitions but nevertheless required you to go back and reread sentences to discern where the argument was going.

Like coherence, stylistic **emphasis** is important but can be difficult to plan. In addition to emphasizing key information in a text visually, through placement, font variation, or other strategies, communicators can emphasize this information through its placement in the sentence. Generally speaking, readers pay the most attention to the information at the end of the sentence, particularly if the end is part of the sentence's main clause. Thus, the ending is a place of emphasis. We revisit this style topic in Chapter Nine's discussion of the evaluation report.

Tone and Voice Through their linguistic expression, communicators project a particular **voice** and **tone.** Tone, you may remember from previous writing classes, can be defined as the writer's attitude toward the subject and the audience. Although the most appropriate tone is determined by the writer's relationships to readers, the readers' needs, and other rhetorical considerations, a respectful yet friendly tone usually works well; a flippant or sarcastic tone rarely does. Whatever the tone, it should project goodwill toward the audience. Novice users of a tutorial may require a supportive tone, readers of reports may expect a straightforward tone, and evaluators of a proposal may call for a confident tone. Job application letters are an ideal type of text in which to experiment with tone, as they require you to draw the line between confidence and cockiness.

Voice is a related stylistic concept that can refer to the level of formality and rhetorical distance between writer and reader. The use of jargon, formal phrasing, and longer sentences can enhance formality, as can the use of third person. Although some of these characteristics are still common in some professional areas, such as those of science and law, the trend in workplace communication is toward informality and the use of first and second person. In some types of texts, such as instructions, first and second person are essentially requirements.

Delivery and Memory

Cicero described **delivery** as the physical presentation of a text. Although delivery has historically been viewed as the icing on the text's cake, a less substantive part of the text to be applied at its completion, this element is increasingly being recognized as crucial to a text's effectiveness. Effective delivery is both functional and aesthetically polished. The former quality creates goodwill, the latter credibility. The functionality of a text's delivery is, of course, situationally defined by its purposes, audiences, uses, and so on. In deciding the type of delivery that would be most appropriate for a situation, communicators should first consider medium, such as face-to-face discussion, print, email, or the web. Genre and format should be considered next, as they can influence the document's visual design. Brochures and résumés are but two genres that follow distinct design conventions.

The main components of delivery or physical presentation on which we will focus here are typography, nonlinear components, and document design. **Typography** may seem inconsequential, but it can significantly affect the readability and tone of a text. Typefaces can be classified as serif or sans serif, the former having finishing strokes on the ends of letters.

> Can you see the horizontal line strokes on the letters of this Times New Roman typeface?
>
> As you can see, this Helvetica font contains no such line strokes and is therefore a sans serif typeface.

Serif typefaces, such as Palatino, Garamond, and Times New Roman, are generally considered more readable for blocks of verbal text, as the serifs help guide the reader's eyes across the page. Some designers consider serif typefaces to be more elegant as well. In contrast, sans serif typefaces are often used in workplace texts for headings and verbal components of visuals such as labels and captions, as they allow for more holistic viewing. Because of their simplicity and, thus, readability, sans serif types such as Arial and Helvetica are also preferred for screens, where resolution can vary. Other elements of typefaces that can affect their readability are line thickness, width (i.e., the space between letters), size, and x-height (i.e., the difference in height between the lower and upper-case letters, which affects how bubbly the font looks).

Type styles, such as boldface, italics, and underlining, are examples of what John Frederick Reynolds has termed the "extratextual features" of delivery. Along with all capital letters, these styles can be used in headings to make the arrangement of a text visually apparent and in blocks of verbal text to emphasize key ideas or to make them more memorable. Although type styles are useful for emphasis, they can, in some situations, detract from readability. Italicized text is less readable on the screen, and all caps should rarely be used. As with typefaces in general, you should be highly selective in how you vary type styles because too many variations can detract from the impact and create an unprofessional tone not unlike that of junk mail.

In relation to emphasis, type styles can serve the fifth canon, **memory.** In ancient rhetoric, this canon referred to the successful memorization of speeches. Many contemporary composition and rhetoric scholars associate it with the memorability of a text, or how well the audience will be able to recall its features and content.

Nonlinear components, a term used by Charles Kostelnick and David Roberts, include visuals or illustrations as well as spacing and shading or color. One of the defining characteristics of technical communication is its heavy use of tables and figures. Proposals typically include timelines, organizational charts, and tables of costs. Annual reports often utilize pie and bar graphs. Photographs or action-view drawings are essential elements of most sets of instructions. Visuals can serve a variety of functions in technical texts, such as:

- emphasizing important information (e.g., callout of warning)
- showing what something looks like (e.g., photograph, drawing)
- showing how to perform an action (e.g., action-view drawing)
- showing relationships or trends among data (e.g., pie, bar, or line graph)
- rendering a large amount of data more accessible (e.g., table).

Visuals can also work with the verbal text in a variety of ways; they can complement it, supplement it, elaborate on it, emphasize it, or illustrate it, for example. For most of us, it may be easier to connect visuals to genres and purposes than to audiences. But workplace communicators should nevertheless consider with which types of visuals their audiences will be more familiar. Although novice audiences will likely understand simple tables, action-view drawings, and pie graphs, they may have a difficult time interpreting a schematic diagram, exploded-view drawing, or 100 percent bar graph.

Color can be a tricky element to manage. Although it certainly can emphasize information and add polish to the document, it is often used in a way that detracts from rather than enhances readability. Like type styles, color should be used selectively so that it maintains its impact. In addition to using color for emphasis, communicators can use it for reinforcing associations in meaning and for unifying the overall communication (Anderson 291). Instructions, for example, sometimes put cautions in red because many readers will immediately read this color as a cue to be alert. Many organizations, such as the American Cancer Society, use specific colors to represent themselves.

Spacing, or the distribution of blank space, is an often-underrecognized element of design. Blank space can serve many important functions. As Dragga and Gong explain, it "organizes and unifies the page, divides blocks of discourse, implies elegance, guides the eye through the page, and links neighboring pages" (171). Most readers prefer a generous amount of blank space, probably for both practical and aesthetic reasons. You'll need to consider your spacing of margins, of indentions, before and after headings and sections, around visuals, and between columns. Spacing also includes the **leading,** or spacing of the lines, as in single or double spaced. In addition to using blank space strategically, communicators should take care to use it consistently. Indeed, **consistency** is one of the most important criteria for good document design; because readers use spacing and other visual cues to interpret information, inconsistent cues will likely confuse them or inadvertently send them the wrong messages.

Summary

Technical and professional communication can be considered rhetorical in several respects: it is socially constructed in specific situations, it is audience oriented, and it is written for persuasive as well as informative purposes. Rhetoric, or the art of discovering the available and appropriate means of persuasion in a given situation, offers communicators a loaded toolbox of concepts for effectively critiquing, assessing, and composing technical texts. The most fundamental way communicators can approach writing rhetorically is by assessing their rhetorical situations, which include purposes, audiences, the subject, the text, and larger institutional and cultural influences. The means of persuasion that communicators can employ can be classified as ethos, pathos, or logos appeals, depending on whether they emphasize the writer's character, the emotions and values of the audience, or the reasoning of the argument, respectively. Communicators can conceptualize the texts they critique and construct as being comprised of five interconnected and overlapping components or canons: invention, arrangement, style, memory, and delivery. You will apply all of these conceptual tools in your service-learning project.

Activities

1. Apply the questions in the heuristic to the last major text you wrote for a course and then to the last nonacademic text you created (electronic texts count). What differences can you note between the two rhetorical situations? How can you account for these differences?

2. Discuss the term *rhetoric* in class. What negative and positive associations do you have with this term? Compare your understandings of the term with the description we've offered here.
3. With Ruggerio's three types of ethical criteria in mind (obligations, ideals, and consequences), list the qualities that you think make rhetoric ethical. Which of these might apply even more strongly to technical and professional texts? Both the Society for Technical Communication (STC) and the Association of Teachers of Technical Writing (ATTW) have established a code of ethics. Keep in mind that the latter organization's code applies to technical writing teachers as well as nonacademic professionals. Visit the following websites and relate the statements in their codes to Ruggerio's three types of ethical criteria.

   STC: http://www.stc.org/ethical.html
   ATTW: http://www.attw.org/ATTWcode.asp
4. Find a brochure or website of two student organizations on campus. Identify pathos, ethos, and logos appeals in the verbal and visual components of these documents. How do the different types of appeals reinforce each other? Which type of appeal does each organization primarily use to represent itself? Why do you think this is the case?
5. Go to one of the progress reports in the appendixes and make an outline of its arrangement (don't just depend on the headings and subheadings to do this). What patterns of organization (e.g., chronological, categorical, or both) does the progress report follow? In what ways might the report's arrangement meet or fail to meet the expectations of the audience (in this case, the instructor and agency contact people)?

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