



14

Writing About Case Problems

AIMS OF THE CHAPTER

Case problems ask you to apply what you have learned to the facts of a specific situation. These problems often appear in practical courses such as management, marketing, teaching, engineering, or writing. This chapter introduces the goals, logic, and process of writing case problems.

KEY POINTS

1. Case problems ask you to analyze a real or hypothetical situation and suggest a solution or course of action.
2. In case studies, you apply all you have learned to practical problems as they appear in real settings. Problem cases help you think about the complexity of real situations and the multiple factors that influence any outcome.
3. In writing about case problems, you formulate the problem, get a sense of the form a solution might take, display all the relevant facts in the most useful way, put the facts together, and develop a plan of action.
4. In writing a case report, you present a problem definition, the criteria for a successful solution, a description of the situation and relevant facts, your analysis and solution, and arguments for the value of your solution. Depending on the situation, an abstract may also be needed.

QUESTIONS TO THINK ABOUT

- Have you wondered whether what you have learned in your courses will ever actually help you decide how to act in a specific situation?
- What kinds of professional situations might you be involved in after you graduate?

- Which courses might you take in which you will have to solve practical problems? What kinds of problems will these courses ask you to address?

Math books present small simplified problems, many already set up in mathematical terms. If you apply the appropriate set of procedures to manipulate the numbers, you come up with the right answer: $(7 + 2 - 3) \times 5 = ?$

Life presents big, complicated problems with no clear terms for thinking about them and no fixed procedures for solving them. Even as you find some way to come to some decisions and work your way through them, you never know whether you have the right answer — you are usually happy if your choices have more positive consequences than negative. Moreover, even if the outcome is good, you often don't know exactly what you did that led to the happy result.

Word problems in math do attempt to connect math with life: 3 apples plus 5 apples; Joe goes to the supermarket with 3 dollars to purchase 6 kumquats at 43 cents each. Such problems actually start helping you as you go to the supermarket and have to compare the money in your wallet to the goods piling up in your basket. So the specific procedures of math do help you make some choices in real-life problems.

But going to the supermarket still remains messy. You are on a diet and your sister loves donuts. You have politically conscious guests coming for the weekend, and they will notice if you serve ecologically wasteful foods. You only have an hour for shopping before you have to leave for class, the parking lot is crowded, and there are long lines at the checkout.

As simple a problem as food shopping involves personal tastes, politics, ecology, nutrition, body image, personal finances, the national economy, and natural disasters in coffee-growing regions. In your shopping you may take into account what you know about nutrition and diet as well as the nutritional information listed on the packets, what news media have said about how political contributions influence legislators, and what your experience tells you about the importance of good family relations. These bits of knowledge complicate your life by making you more aware of the dimensions of any choice; nonetheless, they also provide ways of thinking through the problem and coming to choices. Insofar as you can clearly define each of these problems in relation to the specific knowledge and procedures you have learned, the more certainly and directly you can come to some conclusion. Some problems may be number problems, as in the calories from a nutrient chart, but some clearly are word problems, such as evaluating how tempted you will be if donuts are left around the house, where you can hide them from yourself, and whether you will hear yourself when you tell yourself "No!"

Fortunately, every time you go shopping you don't have to deal with the

Choosing groceries is not always an easy problem.

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whole economy, your total psychology of dieting, or your entire history of family relationships. You focus your concerns and make your choices as best you can because you have to. You reduce the complexity to manageable proportions. Practical problems have a way of tying together complexity and then focusing on what is important for making a decision. Some academic subject areas directly prepare you to solve real-world problems: engineering, business, social work, teaching, journalism, and law. There you learn the relevant complexities of the world so you can make intelligent choices about how to run a business, teach a class, develop a piece of software, or write a news story for the morning paper. Problems bring the potentially unending complexity of life together into an intelligible framework.

Even those who study purely academic subjects in the most abstract disciplines, seemingly far removed from the world's mess, still wind up having to address problems — philosophical problems, research problems, and problems of deciding what knowledge is worth knowing. So as you immerse yourself more and more in the complexities of your subject, you are also more and more likely to become focused around the problems that define the work of your specialty or profession. In some majors this happens early — business students are presented with case problems from the first chapter of introductory textbooks — and in other majors it happens later.

One way to learn to deal with complex problems is through studying cases. In fact, case study is one of the main tools in business and legal education. Illustration cases present both problems and the solutions that individuals or groups have come to. The case discusses the factors affecting the situation and evaluates how well the people solved their problem.

Consider the following case from a marketing textbook at the end of a chapter on sales promotion. The case opens with a description of the problem facing the soft drink brand Dr. Pepper in trying to compete with the more popular colas. The case then examines the solution of special promotions, described in detail. The case ends with an analysis of the results to the promotion strategy. The discussion questions that follow in the textbook point toward the main issues raised in the case.

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Court decisions also are forms of problem solutions. From the representations of the two opposing sides, justices must define the problem (that is, determine the issue), evaluate the issue in relation to the relevant facts, rulings, and law, and come to a decision, or “holding.” The holding resolves problems of who is in the right, who should be rewarded or punished, and what should be permitted or prohibited. The excerpts of Supreme Court de-

cisions on pages 140–144 provide examples of how problems and solutions are presented in law.

As you gain more skill in a field, more of the responsibility for the problem is yours. You may be given the facts of the case, but it is up to you to define the problem and come up with the solution. Business students in advanced courses are given 20- or 30-page cases filled with extensive detail which they must sort through before they make recommendations. Law students, after they have “briefed,” or summarized, many court cases, must write their own arguments. Engineering and architecture students are given increasingly difficult problems of design, usually resulting in a major design project in the senior year. Often the projects are more than classroom exercises, since they are prepared for actual companies where students have worked as interns.

Solving problems draws on all you have learned. As you make sense of the details of a case, you must think about how ideas and models you have learned might apply in the situation, analyze which factors are the most important, and then find a solution that best addresses the factors you have analyzed.

Writing and Problems

In studying how people solve problems, psychologists have found that it helps to externalize your thinking process — to get the thinking outside of your head so you can organize and examine it. Writing allows you to put your thinking on paper, where you can look at the various parts of the problem and your reasoning.

However you solve the problem, you will need to represent your solution to others and convince them that your solution is correct. This is especially true for problems presented in a class context, where the professor is also looking to see how you reason through a problem and how you use the knowledge you have learned to help you think through the problem.

The writing you may do in working through problems and in representing the problem and solution to others may use mathematical or other special symbols, may use drawings and other graphic displays, or may be in more common, everyday prose. The method of representation will depend on the kind of problem and materials you are working with. Computer programs of many sorts can help you in working through, organizing, calculating, and finally presenting the problem. These also will vary in relation to the problem you are working with, and you would be wise to look into the representational and problem-solving practices of the field, as well as the electronic tools currently being used. The courses in your specialties will likely introduce you to the usual way of representing and working through problems.

Psychologists have found some practices important in most problem solving. The following presentation of these techniques emphasizes the way in which forms of writing can help and the kinds of problems that involve ordinary language, resulting in a written report. These problem-solving techniques are also appropriate for nonverbal processes that may be thought about and represented in mathematical, graphical, or physical ways.

Steps in Solving Problems

Formulating the Problem

Perhaps the most important step in solving a problem is formulating it. The solution you seek depends on how you word the problem, and different wordings may set you on different paths. So it is very important to find a formulation that crystallizes the problem.

Many problems can be seen as a current situation that you would like to see transformed in a certain way. To do this, you have certain constraints and obstacles to overcome and certain resources you can use. Through some series of actions, you wind up with a new and desired situation. Think of the classic puzzle of the farmer, a chicken, a fox, and some grain that need to be transported across a river in one small boat. In the beginning situation, all the creatures and objects are on one side of the river, and the goal is to get them all on the other. The constraints are the size of the boat, the fox's tendency to eat chickens, the chicken's tendency to eat grain, and the grain's tendency to be eaten by passing birds if left untended. The means are to transport the objects one by one and the ways in which the objects can be combined or isolated. The solution would be to specify which ones to carry in what order.

This is not so different in form from many problems in business, where you have a situation that may have some unfortunate consequences and you need to transform it to some happier state, like greater efficiency or harmony or profit. You have only limited means and must take into account all the constraints — so you are looking for opportunities. Similarly, in engineering design problems, you have some capabilities and resources, but you need a component to make the system work. Architectural, social, or political problems can also be defined in similar ways.

If your problem is to transform a situation, you need to specify the current situation, the desired final situation, the possible means of transforming the former to the latter, and the constraints and obstacles that must be overcome.

Another typical kind of problem is a diagnosis, in which you determine how to fix something that is broken or has gone wrong. You must first understand how the system operates and what factors are essential to its success, whether you are concerned with an electric dynamo or a well-functioning family. You then identify those elements that are not as they should be in the particular problem case and present a plan for remedying the difficulties.

A third kind of problem often appears in legal, negotiating, or other adjudicating contexts. In these problems you sort out the claims of disputants and determine a resolution of the dispute. Here are the facts of the case; the principles that guide solutions; the rights and obligations of the participants; the power, interests, and perceptions of the participants; and the consequences of various solutions are all taken into account.

Whatever kind of problem you have, the better you define it in meaningful and useful terms for yourself, the better you can focus your energies in

solving it. If an initial formulation is handed to you by the instructor or the textbook, you still need to restate the problem in your own terms. Then it may be useful to chart out the various parts of the problem. A list may be adequate, but a flow chart or other graphic representation may be even more useful.

Once you have the parts of the problem laid out, you may want to think through what is difficult or simple in the problem. Freewriting can help you consider which obstacles seem more difficult than others or raise new questions. It may also tell you whether you may be able to define the desired end state in even more specific terms. Annotating your chart with added comments can also help you see whether there are any hidden assumptions or variables in the starting situation. Any kind of note taking may help you consider parts of your problem formulation more deeply.

Searching for the Form of an Answer

Once you have a sense of the problem, and particularly the goals you want to accomplish, you can probably see fairly clearly what form the solution will take. For example, in the farmer-crossing-a-river problem, you know you will have to establish a sequence for carrying the items across and that that information could be presented in a chronological list. Now consider that your problem is to propose a marketing strategy for a new product. If you know that marketing strategies usually contain an analysis of the demographics of potential consumers, a discussion of the media that reach those consumers, an analysis of what might attract them to the product, a theme for the marketing campaign, and a budget, then you have a pretty good idea what you are looking for. Moreover, if you know that such a plan is usually presented in a standardized format with the specific topics that needed to be covered defined by the standard sections of the report, each section having a standardized presentation, your work is pretty well defined for you. (See the discussion of genre on pages 209–210.)

You may not be able to predict in advance what form the solution of more open-ended problems or more unusual problems might take. Nonetheless, the more you think about the factors that must be fulfilled to solve the problem, the more you will gain a sense of the kind of solution you are looking for.

Becoming Aware of the Facts and Using Them

With a clearer view of what you are looking for, it is easier to identify what facts are relevant and what will help you sort through the problem. If all you know or can know about the problem is given in a case statement in the textbook, then you need to reexamine it to pull out the most important and relevant data. In fact, with your new understanding of the problem, some facts may leap out at you. On the other extreme, if the problem involves a real-world situation, such as from fieldwork or a job-related project, then you

need to identify for yourself what information you need and how you can collect it.

You can even think about an ideal shopping list for information. If you could have any information at all about the problem, what would most help you solve the problem? Once you have developed a wish list, you can then think which items you might get or what information might serve as a substitute. You might get that information from a person, existing documents, or your own data collection and measurement, or you might seek the information in a library or a reference source.

It is helpful to make a long shopping list, because in the course of this brainstorming you may realize that one kind of information will open up the whole problem. Then you can eliminate the rest of the list. Any information, if it is relevant, helps a great deal. Discovering some facts can cut through a lot of uncertainty, guessing, and hunches. Paying attention to the facts, although it can't directly tell you what to do, can help you see which choices are more realistic.

From Facts to a Plan

Depending on the problem, there will be great variation in how you put the facts together. Sometimes facts will lead almost directly to a solution. At other times you may have to work to pull everything together. You may need extensive analysis (see Chapter 9) or synthesis of complexity (see Chapter 13). Even with the big picture clear, a solution that addresses all the complex factors may still require some ingenuity.

Whatever method you use to sketch out your solution, it is always useful to rethink the specific details. As your plan becomes more concrete, you may discover that you know better what you need to accomplish, and you may find an even simpler and more direct way to accomplish it. Your solutions may help you know even better what the problem was.

Writing Up the Presentation

Often there are highly standardized formats for presenting problems and solutions in particular disciplines or professions. You should seek out appropriate models and guidelines to follow. The following general principles may help you in many cases, even when you are working with a standardized format.

State the problem clearly near the beginning. This orients your reader toward what you will accomplish in the paper and provides a way of interpreting and evaluating what you present. Stating the problem clearly also focuses the reader's attention on the importance and interest of your solution. In some cases it may even be useful to explain why the problem is interesting or important, or why the way you formulate the problem is an improvement on usual ways of defining the problem.

Stating the problem near the beginning also helps you structure the paper because it defines the central theme that ties the presentation together.

All the parts of the presentation to follow can be presented in relation to the problem.

Give an idea of the kind of solution that would be adequate for the problem. Identify what a good solution would have to accomplish, what form it would have to take, or what conditions it would have to meet. This statement prepares your readers for the solution you will propose and offers them criteria by which to evaluate that solution. If your solution follows the form and fulfills the criteria you have established, it is likely to appear strong and persuasive.

Elaborate the problem by presenting the relevant detailed facts. Specify the details that define the starting situation, the constraints, the obstacles, the resources, the opportunities, and the puzzles. These details give the readers a clearer idea of the problem and provide the basis for your analysis. Be selective. By presenting some details as relevant, and not others, you are indicating what you think is important to understanding the problem.

Although you have some flexibility in how you present the problem, knowledgeable readers may see the problem in different ways and might wonder why you present some facts and not others. Moreover, your instructor is likely to be evaluating how well you chose your details. If there is any question as to which is the most important information, you might wish to justify your choice by discussing why certain aspects of the situation are more significant than others.

Discuss how the facts fit together to provide clues for the problem's solution. This is your analysis or thinking through of the problem. The purpose here is not to recreate your own thinking process, which may have had many frustrations and false turns, but to present for the reader a clear path to understanding the problem and the value of your solution. You may also wish to discuss some theories, ideas, or models that help put the problem in a perspective that leads to a solution. Again, in an academic setting, where the instructor is evaluating the quality of your analysis and thinking, this section may be of special importance. In certain other situations, however, readers may not be so concerned with the reasoning that led to the solution as much as with the benefits and other consequences of choosing one solution over another.

Describe your solution carefully and clearly. Readers need to know exactly what you propose. Of course, being clear and specific about your solution puts you on the line and makes you accountable for what you propose. Your solution may in fact be wrong. But in an academic setting, a clearly presented, detailed solution is still better than a vague proposal. A teacher may still give you an *A* on your project even while pointing out that the plane you design would never get off the ground.

Argue the value of your solution. It may be appropriate to project the consequences of adopting your solution and to point out the benefits of this solution over others.

Provide an abstract. To tie together a long and complex proposal, it is often useful to put at the front of the presentation a short abstract of the problem and your proposed solution. Depending on the size of a project, this abstract might be from 25 words to a page. This is particularly important in

fields where you are following professional models where some kind of executive summary is required, as in engineering, management, and government policy.

Sample Student Problem Solution

The following case problem appears at the end of an education textbook chapter on ethical issues faced by teachers.

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Leonard Greenbaum, taking a course on introduction to teaching, was assigned to write a response to the "Righting Wrongs" case after the class had discussed the ethics of standards, expectations, and individualization. This is the paper he wrote.

Leonard Greenbaum

Righting Wrongs: How Far Can a Teacher Go?

Like most other concerned professionals, we as teachers will occasionally face difficult ethical dilemmas. The case described in "Righting Wrongs" presents me with two difficult options: on the one hand, I could give Ken the grade that he has earned and, in doing so, allow him to be victimized by another's injustice; on the other hand, I could raise Ken's grade in my class and possibly rescue his college career. The latter option would certainly appear to be the best thing for Ken. By raising his grade to an A+ I would be helping him to win the chance at higher education that he has legitimately earned. The only problem is that, in doing so, I would also be committing a serious breach of professional ethics—the same kind of breach, in fact, that I suspect Mr. Kingsley of committing. As a teacher I am charged with setting standards of performance for my class and evaluating each of my students consistently within those standards. Failure to uphold this responsibility hurts the school, the other students in the class, and, ultimately, the student who would appear to benefit from the inconsistency.

The central question in this example is this: does one person's unethical action justify another person's equally unethical reaction? I do not believe that it does. Mr. Kingsley has decided to ignore the standards of his profession and give an unfair grade. The grade is unfair, not because it harms a student's chance for college, but because it does not accurately reflect a student's performance. And if I were to give Ken a higher grade than he deserved, I would be making the very same error. The fact that a grade may help or hurt a student has nothing to do with its appropriateness. Teachers must take responsibility for evaluating a student's performance, and any grade that fails to do this—whether it works for or against the student's short-term interests—must be considered unfair.

Unfair grades, whether they help or hurt a student, damage the integrity of the teaching profession and work against all of the students in a class. Teachers have a great deal of leeway in setting grading criteria for their classes, but once these criteria have been set, they constitute an implicit contract with all of the students in the class. When I explain to my class what it takes to get a certain grade, I am promising my students two things: 1) that if they meet these standards, they will get the grade; and 2) that, if they don't, they won't. Every student who fails to make an A in my class has some reason for not doing so. Some of them come from difficult home situations, some have to work to afford college, and some just don't have the effort or the ability to meet my standards. As much as I care for each of my students, I cannot allow my concern to influence my grading. If I make an exception in favor of one student whose extraordinary circumstances have come to my attention, I am, in effect, unfairly punishing all of the students whose circumstances I do not know or have not considered.

But it is not just the other students in the class who are damaged by an unfair grade; ultimately, no student benefits by unearned special treatment. If I were to give Ken a grade that he knew he had not earned, I would teach him that the only way to combat one injustice is with another injustice—and I firmly believe that we should teach our students better than that. Students will remember the values we teach them long after they have forgotten the facts and formulas that they memorize for our tests. If I am honestly concerned about helping Ken get into college, I will gladly use all of the ethical means at my disposal to help him. I will talk to the principal, the superintendent, and the school board on his behalf, and I will even write a letter to his college committee explaining the circumstances. But I will not cheat for him. And I will not teach him that one lie cancels out another.

No matter how much I may wish for their success, it is not my responsibility as a teacher to win scholarships for my students. It is, however, my responsibility to evaluate them fairly and teach them the value of honesty. Ken's college application will contain four years of high school transcripts, his ACT or SAT scores, writing samples, extracurricular activities, and numerous other factors—not just two classes in his senior year.

The fact that Mr. Kingsley has chosen to ignore fair grading should have no bearing on my decision to uphold it. In the final analysis, he must answer to his conscience about his grading procedures and I must answer to mine, and the fact that he has acted unethically is not an excuse for me to do the same.

Thinking About Student Writing


1. How does Leonard Greenbaum rephrase or summarize the problem posed by the case study? How does his statement compare to the original?
2. What does Leonard Greenbaum state as the central question in this problem? How does the definition of this central question set up the terms for the analysis that follows? Do you agree that this is the central question?
3. What method does the author use to analyze the problem? What elements or factors does he examine in his analysis? What arguments does he use to support his analysis? What conclusions does he come to?
4. How successfully do you think Leonard Greenbaum has analyzed and solved this problem? Are there aspects he ignored or skipped? Does he analyze appropriate aspects of the issue? Are his conclusions appropriately supported?

Assignment

SOLVING CASE PROBLEMS

1. The following three cases are from a chapter on ethical decision making in a textbook on teaching. Read each of the following case problems concerning ethical dilemmas teachers face, and think through what you would do in each case. Then choose one on which you are going to develop a full solution. Use the various writing techniques mentioned in this chapter to think through your solution. Then write up your solution in a case report. You may add any details you feel necessary.

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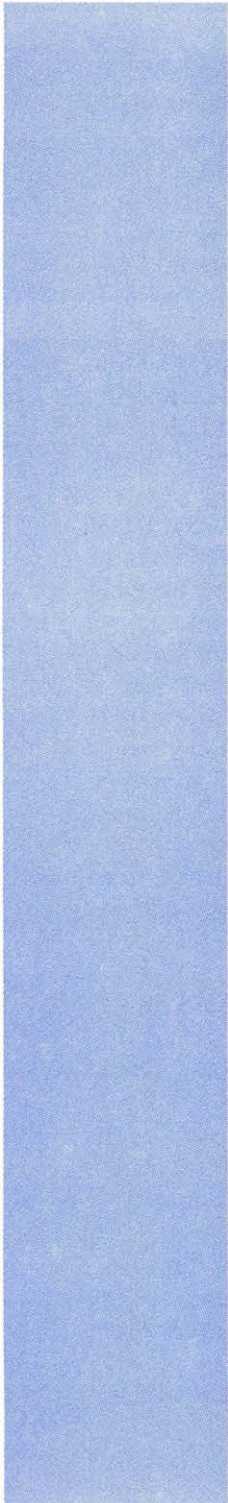
2. The following case in business ethics is from the textbook for a management course. After reading and thinking through the case, write up a case report defining the problem, analyzing the situation, and presenting your solution.

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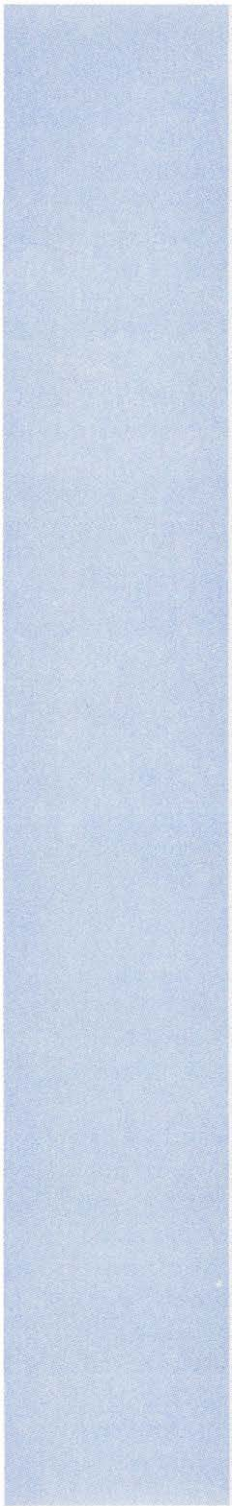
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3. The following discussion and case is from a textbook used in courses on law and society, *The Legal Enforcement of Morality*, by Thomas Grey (New York: Knopf, 1983). Read the material and follow the instructions.

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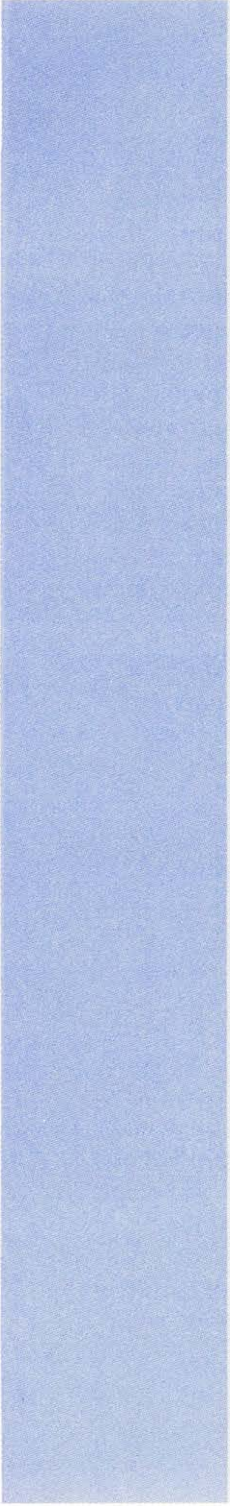


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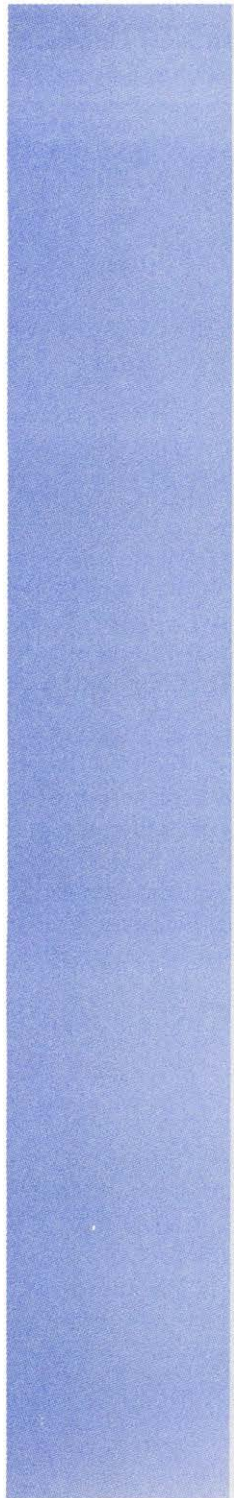
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4. The following case is from a writing textbook, *Casebook Rhetoric*, by David Tedlock and Paul Jarvie (New York: Holt, Rinehart and Winston, 1981). Read the material and write one of the suggested assignments.

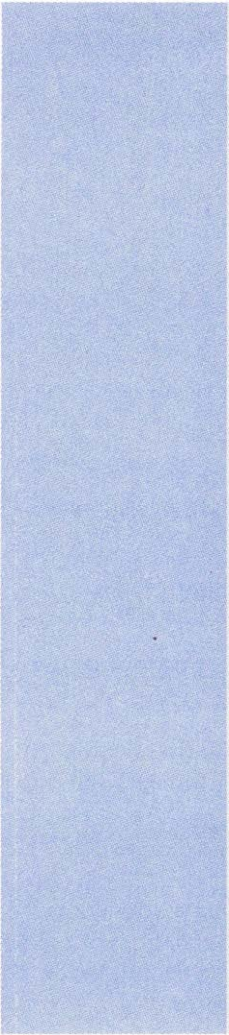
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**Getting
Involved
Electronically**



Many areas of study and practical work have simulation programs that use the computer environment to create real-seeming situations for you to respond to. These programs range from simulations of the stock market's response to various economic factors to simulations of climate change due to atmospheric pollution. Locate a problem simulation program for some area that interests you and work with it for a while. Then write a description of the kinds of problems it poses for you to solve and the kinds of thinking you need to do to solve those problems.