There was something in Bobby that wanted to do it all. He wanted to play the part, dance the part, conduct the orchestra, produce the play. It was a kind of an obsession with him.

—Robert Whitehead

Bob Fosse died on the streets of Washington, D.C., on September 23, 1987, in the arms of his dancer wife, Gwen Verdon. He was within sight of the National Theater where his dancers were dressing for a revival of his show *Sweet Charity.*

Fosse was a Broadway legend, starting his career as a teenage hoofer in *Chicago.* As fine a dancer as he was, it was as a choreographer that he made his mark with shows like *Cabaret, Pajama Game, Damn Yankees, Chicago, Pippin,* and, of course, *All That Jazz.*

Choreographers are the case teachers of the dance world. The modern greats like Martha Graham, George Balanchine, Jerome Robbins, and Agnes de Mille take a musical score, a line of a poem, or an image and create a terpsichorean masterpiece that can inspire, provoke, titillate, irritate, or enrapture audiences. Unlike past masters, today’s choreographers leave notes and videos to help others see their vision.

There is something ironic, though, about giving explicit instructions on how to play or dance to jazz. My father, a vaudevillian and jazz pianist who banged about the country with dance bands in the 1930s, put it to me this way: Jazz is for the moment. It should never be written down or recorded. It is a once-in-a-lifetime thing.

Like jazz, case studies are never played the same way in any two settings. That is what makes them unique. They are for the now—for the moment. Sometimes they are unforgettable.

It’s never the same the next time you play it. It is for the musicians who play it and the listeners who are there at the moment. It is for the now. The moment that you regiment it, it’s no longer jazz.

And yet, we do record it and regiment it, at least to varying degrees. Even jazz musicians need a melody line to guide them through their riffs. So it is with case teachers. That’s what case teaching notes are—a melody line to show the way. They can be used as gospel, as a big band leader might insist, or ignored entirely.

Most of us seek a little guidance, especially newcomers, folks who like the style but cannot spend years in a Chicago bar or a New Orleans brothel to capture the rhythm and tone of a Jelly Roll Morton. Perhaps we are not destined to be a Dizzy Gillespie, but we still can learn how to play a reasonable jazz number or run a case. We don’t have to accept Louie Armstrong’s dreaded pronouncement in reply to the question, What is jazz?—“Man, if you gotta ask, you’ll never know.”

Ignoring Satchmo’s admonition, or at least not generalizing it to include case study teaching, I have in several columns attempted to answer the question, What is a case? Here, I commit the further effrontery of sug-
suggesting how one can help others teach cases by writing good teaching notes. After all, as teachers, explaining is our business. So let’s have at it. Here is how you can create teaching notes so that people can run a case, even if they can’t be the Bob Fosses of the classroom.

**HOW TO WRITE TEACHING NOTES**

The tradition of including teaching notes along with cases is long standing. They were included practically from the beginning for one key reason: new case teachers wanted them! The naive reader wished to know what the author had intended, not that he expected to follow the author’s intentions slavishly, but at least he didn’t want to miss some key point.

Moreover, the novice needed all the help he could get. He welcomed the views and experience of the seasoned veteran who knew the strengths and weaknesses of the case. He wished to know the traps and pitfalls to avoid, places where students were apt to travel, the quagmires that were ahead. He needed notes not just as a security blanket, he needed them to survive.

Teaching notes are not only for the tyro; veterans find them helpful too. Seasoned practitioners use them to explore possible angles they might have missed. They can examine any new case much more rapidly, especially unfamiliar material, if they have the author’s road map in hand.

To see what teaching notes are all about, one can do no better than to turn to the business-school approach.

**THE CASE STUDY**

Cases have been used there since the early days of the century. So the headings below are derived from that venue.

**OUTLINE FOR WRITING CASE TEACHING NOTES**

1. **Introduction/Background**
   
   All teachers are helped by knowing how the author has put a case to use in the past, in which course they have tried it, where in the semester it has been used, and what type of background the students will have when they encounter the case. This information belongs in this section. It doesn’t mean that the case is limited to the author’s experiences, but it gives the reader a chance to understand why some topics and readings are included and why others are not. Thus, the instructor interested in using the case can adjust his style, reading list, or comments appropriately.

2. **Objectives of the Case**
   
   This section is important. Seldom do instructors in traditional courses take the time to think about what they are really trying to do in the lecture classroom—except to give students the facts, the principles of the field. Most lectures (at least in science classes) are at the lowest level of Bloom’s Taxonomy of Knowledge. Instructors often think they have done their job when the students can regurgitate the details of the lecture on a multiple-choice test. The true responsibility is not so easily discharged or evaded by case-study teachers. No, they must deal directly with the meaning of the information in the context of real-life situations. Ideally, teachers should be able to list exactly what the students should know and be able to do after they have finished the case that they didn’t know and couldn’t do before they went through the case. This is the purpose of this section of the teaching notes: to force the instructor to be explicit about his goals and objectives.

   This isn’t the place for platitudes, such as, “the students will learn how to think critically” (don’t we wish?). This is the place for specific statements, such as these examples: Students finishing the case will be able to (1) take the data in table 3 and graph it appropriately.
the case study

THE CASE STUDY

ately, (2) write a critical essay about the pros and cons of genetic engineering in crops, (3) write a persuasive letter to their congressional representative about the benefits of cloning, (4) solve the equation p^2 + 2pq + q^2 = 1 given the following information . . . , (5) design an experiment that will test the following proposition . . . , and so on.

III. Major Issues

In business-case literature this section is referred to as blocks of analysis or issues for discussion. Under this heading the case author should identify the major issues in the case that the students should analyze. The case author should clearly indicate which issues he thinks will (should) come up and what information he expects to help extract from the students. There may be explicit questions that must be addressed. If so, then the author should give a synopsis of a reasonable answer. This part of the teaching notes is apt to be the most extensively developed.

IV. Classroom Management

This section is a must, for it tells the reader just how you used the case in a classroom situation. The explanation must be presented in detail. What did you do first, second, and last? How long did certain activities take, e.g., 15 minutes for a group activity followed by a five-minute summary of each group’s findings. Put it all down; what appears second nature to you will be inscrutable to others.

All cases can be run with different strategies. The traditional discussion method employed by law and business schools is only one approach. Using small groups, such as in Problem-Based Learning or other Cooperative-Learning methods, is another favorite approach. Whatever method you use, spell it out.

There may be limitations as to the length of the case and notes. For instance, the Journal of College Science Teaching has limits for articles in the range of 2,500 words. Many cases and notes clearly exceed this. A solution is to publish the case and a truncated version of the notes and have a more detailed description of the latter on a web site such as the National Science Foundation-supported site at the State University of New York at Buffalo: http://ublib.buffalo.edu/libraries/projects/cases/case.html.

Under the heading “Classroom Management”, the author must indicate what pre-class assignments she may have given before the students see the case. If the instructor is using the discussion method, it is extremely helpful to have a list of questions that may be used for study and during class. Also, this is the place to put any follow-up assignments that you might suggest be used after a discussion of the case is finished.

Study Questions. These are questions that are listed at the end of various sections of the case to help students focus on particular critical issues. There should not be so many as to overwhelm the student. These questions may or may not be directly addressed in the general discussion of the case. Nonetheless, they are there to serve as signposts of important topics. The teaching notes should at least briefly state reasonable answers to these queries.

Questions in the Classroom. Teaching notes frequently provide a list of questions that can be asked in any discussion of the case. Naturally, these are chosen to get at certain prime issues in provocative ways and are designed to facilitate discussion. Sometimes they are categorized as Introductory Questions, Challenge Questions, Decision Forcing Questions, and Summary Questions.

Generally, case practitioners in science classes find that it is best to first ask questions that get at the facts of the case. So, if we are dealing with a case on global warming, early in the discussion an instructor would surely ask: What is global warming? What is the evidence that it is occurring? What is the counter evidence? Only after such factual questions are addressed is it safe to turn to social issues.

To illustrate the dangers of starting with the more social or personal issues, let’s take a case that two colleagues and I wrote called Bad Blood, which we published in this journal in 1994. This deals with the Tuskegee Syphilis Project, where African Americans in Alabama were denied treatment for the disease. Consider what might happen to the discussion if we started with an opening question such as, “Do you believe that there was racial prejudice involved in the Tuskegee study?” Chances are you might never get to the science at all! My rule of thumb is when dealing with controversial social issues, cover the science first. This sets the tone for a reasonable discussion and guarantees that you will cover the facts as well as the emotional issues.

Board work. Students new to case-study work often wonder what they have learned from a given case. They are apt to think that it is merely hot air they are hearing from their compatriots. There is one good way to overcome this attitude. Write important concepts on the board or overhead projector as they emerge from the discussion. The very act of writing key points says that the instructor values a student’s contribution, especially if the name or initials of the contributor are jotted down next to the idea. Board work gives structure to the discussion, demonstrating it is not aimless rambling in which we are engaged. Students who are passionate about notes will cherish you.

If, as I am arguing, blackboard work is essential to the success of a case and forms a pivotal part of determining how a student sees its worth, then it follows that an instructor had better give serious thought to how she is go-
ing to lay things out ahead of time. She might decide that factual points should be written on the left side of the board, perhaps developing a concept map as points are brought up. Later in the discussion, when the conversation turns to the possible decisions that the protagonists in the case might make, the teacher might plan to list these on the right side of the board under a heading such as Short-Term Solutions and Long-Term Solutions. The pros and cons of these topics can be interspersed along the way. In short, if board work is important to your case (and I am arguing it should be, especially if you are using the discussion method), then give the case reader a hint or two how you do it here in the Case Notes.

Closure. Most students want closure on a case. They want someone to pull together the fragments and tidbits of the discussion and ignore any silliness that happened during the hour. They don’t want a canned speech so much as a true summary of what went on. This can be done by the professor or a student.

Teaching notes are often enhanced by a short summary statement about the case, including how the case impinges on other topics in the course or on problems in society. Thus, after a case on global warming, a summarizer might note how the ambiguities in the case fit the general pattern of environmental problems in that we frequently do not have enough information and still must make decisions with imperfect data.

Not all case writers are keen on closure. Some prefer that cases be left hanging, like an unresolved C 7th chord. They like leaving the students with the nagging problem, believing that the students will continue to ponder the question further. (Hope springs eternal.)

V. References

Everyone appreciates a list of references to follow up particular lines of thought, especially if they are annotated. Today, it is especially valuable to include Internet addresses as well. Don’t leave these out of your lovingly developed teaching notes.

AND ALL THAT JAZZ

So I return to the bistros and dance halls and theater lights. Case writers are indeed much like choreographers as they lay their plans. Both recognize that no performance is like any other: the audience matters—a great deal; some days are good; some days are bad. But when things are going well, there is a synergy that can occur that transforms any work when a performer is ignited by the excitement provided by the audience.

Like jazz, cases are never played the same way in any two settings. That is what makes them unique. They are for the now—for the moment. Sometimes they are unforgettable.