in a homework assignment force themselves on our attention when spoken by a peer. There is no point in covering content for content’s sake—the point is to cover content in a way that ensures that students engage with it. It is because we take content so seriously and want students to understand certain key ideas accurately and thoroughly that we feel discussion is indispensable.

A COMMITMENT TO DISCUSSION MEANS THINKING THAT OTHER TEACHING APPROACHES ARE SOMEHOW LESS WORTHY OR IMPORTANT.

Both of us use lectures, simulations, independent study, video, intensive reading, and any other method that works to engage students in learning. We believe that kinesthetic movement needs to be introduced into classrooms to engage the body as well as the mind. For us, anything goes as long as it assists learning. For example, both of us love to lecture and both of us believe that lecturing is often necessary to introduce difficult ideas and to model critical inquiry. But we do believe that discussion can serve many important purposes (which we outline in Chapters One and Two) and that teachers sometimes abandon discussion too early simply for lack of some creative ideas for implementation.

DISCUSSION IS UNREALISTIC TO CONSIDER FOR LARGE UNDERGRADUATE LECTURE COURSES.

We have taught core courses in laboratories or auditoriums with one hundred or more students present. We accept that these are important constraints and that they make experimentation with some of the exercises we suggest virtually impossible. But even under these conditions, we have usually found that it’s possible to do some small, though not insignificant, things. For example, as we argue in Chapter Three, a lecture in an auditorium can incorporate two- to three-minute buzz groups or reflection pairs, followed by two minutes of random responses from students. Doing these things stops students from falling into a deep reverie while you’re talking and forces them to engage with the ideas you think are important. It also allows you to make reference to students’ reflections during the next segment of the lecture, which is one way to keep their attention high.
YOU CAN'T TAKE EXERCISES PROPOSED IN A BOOK AND SIMPLY PLOP THEM DOWN IN ANOTHER CONTEXT WITH THE EXPECTATION THAT THEY'LL WORK.

We couldn't agree more with this point. Both of us now find ourselves working in graduate education, and though our experience covers high schools, community development, vocational institutes, community colleges, and adult education centers, our current situations and responsibilities as university professors undoubtedly shape what we write. So we expect that any ideas that you find potentially useful here will be adapted, altered, abandoned, or completely reshaped as you think through how they might work in your own practice with your own students.

I THINK DISCUSSION IS FINE IN PRINCIPLE, BUT BECAUSE I'M INEXPERIENCED IN WORKING THIS WAY, I'M BOUND TO FAIL.

One short response to this, of course, is that the only way to get experience of leading discussion is to do it! Another is to acknowledge that the two of us fail all the time—things don't work out as we anticipate, students respond less enthusiastically than we had hoped, and so on. Indeed, some of the exercises we propose—particularly those in Chapters Seven and Eight dealing with race, class, and gender—are quite risky. If you feel so uncomfortable about an exercise that you're overwhelmed with anxiety, don't bother with it. Instead, try to find colleagues who are experimenting creatively with discussion and ask if you can sit in on one or two of their classes, perhaps offering to be a sounding board, resource person, or cofacilitator. Observing their practice might give you a better sense of what to expect when you decide to work this way.

DISCUSSION NEEDS AN INVESTMENT OF TIME.
I CAN'T MAKE SINCE I ONLY SEE STUDENTS IN BLOCKS OF THIRTY TO FORTY MINUTES.

There is probably a minimum amount of time needed for a deep engagement with discussion. Serious consideration of ideas needs time for these ideas to be stated, heard, restated, questioned, challenged, refined, and stated again. Listening and responding take up at least as much time as exposition. Also, the time it takes to build the degree of trust among members that is such an important feature of good discussion cannot be rushed. If you take discussion seriously, you could experiment with the timing of classes (for example, canceling class one week and doubling up the next), if that's possible. Or you could try short buzz groups and paired listening exercises. But it may be that you're currently working in a teacher-centered situation where discussion is impossible. That's fine. At the very least, you can try to model through your actions as a teacher some of the dispositions of discussion that we propose in Chapter One.

DISCUSSION DOESN'T HAVE TO BE TIED SO MUCH TO DEMOCRACY—IT'S JUST ONE DIFFERENT TEACHING METHOD AMONG MANY.

We would have to disagree with this contention. For us a commitment to discussion and an honoring of the democratic experience are inseparable. We realize we may have a philosophical difference here with some readers, who see discussion as a method disconnected from any political significance. But for us the respectful engagement with others that lies at the heart of discussion encapsulates a form of living and association that we regard as a model for civil society that has undeniable political implications. Discussion is a way of talking that emphasizes the inclusion of the widest variety of perspectives and a self-critical willingness to change what we believe if convinced by the arguments of others. We believe that most political decisions boil down to choices about who gets what, about how the limited resources available in any social group are used or allocated. The conversations informing such decisions must, in our view, be characterized by the same respectful hearing of the widest possible range of perspectives and the same self-critical openness to changing ideas after encountering these perspectives that undergird discussions held in college classrooms. These classrooms may be one of the few arenas in which students can reasonably experience how democratic conversation feels. Taking discussion seriously moves the center of power away from the teacher and displaces it in continuously
shifting ways among group members. It parallels how we think a democratic system should work in the wider society. In this sense, classroom discussions always have a democratic dimension.

**DISCUSSION IS FINE FOR "SOFT" SUBJECTS LIKE THE HUMANITIES AND SOCIAL SCIENCES WHERE DISAGREEMENT AND DIVERGENCE ARE POSSIBLE, BUT IT HAS NO PLACE IN "HARD" SUBJECTS LIKE MATHEMATICS, STATISTICS, AND THE NATURAL SCIENCES.**

We agree that discussion should be used only when appropriate. In the teaching of unambiguous factual information (for example, the population of Baltimore in 1850, the chemical composition of sodium chloride, or Boyle's law) or inculcation of specific skills (how to load software or how to give an injection), there seems to be little scope for using the method. However, things are not always as simple as they seem. The exact figure given for Baltimore's 1850 population is actually a human construct, dependent on the data-gathering techniques and modes of classification statisticians decide to use, as well as on the learned behaviors of the data gatherers themselves. The hypothetico-deductive method that lies at the heart of intellectual inquiry in the natural sciences is actually a human system of thought, developed at a particular moment and place by a particular person (Francis Bacon) and refined over time by philosophical advances in the logic of the scientific method (for example, Karl Popper's principle of falsifiability). What seem to be standardized, objective, and unambiguous skills of computer usage or nursing care are actually protocols developed by particular groups and individuals. Which program or protocol becomes accepted as professionally dominant, as representing common sense or the norm, depends on which group has the power to promote its way of interpreting good practice over other contenders.

So we would argue that there is no knowledge that is unambiguous or reified (that is, that exists in a dimension beyond human intervention). The seemingly immutable laws of physics are always applied within a certain range, and the boundaries of that range shift according to research and according to who has the power to define standards for acceptable scientific inquiry. It is salutary to reflect on how many intellectual advances have been initiated by thinkers who were ostracized and vilified as dangerous or crazy at the time they were working.

However, we would also acknowledge that there are times when discussion is not the best way to help students learn something. When we attend workshops to learn how to use the World Wide Web, we don't want to spend the first hour problematizing computer technology. Rather than consider how access to this technology is stratified by class, gender, and race and how it reproduces existing inequities, we want to know which search engine to use. Instead of questioning whether or not this technology privatizes people and, by reducing the chance for people to gather physically in public places, thus prevents new social movements that challenge the status quo from forming, we want to know which button to press to display graphics. Of course, we would argue that the best teachers start with learners' needs (such as which search engine to use and which button to press) and then nudge them to question the social organization of the technology they are using.

We would also point to the example of McMaster University in Hamilton, Ontario, where medical students spend three years working in small groups. Ferrier, Marrin, and Seidman (1988) report that according to their supervisors, graduates of the program performed better in their first year of practice than graduates from other universities. When taking the exams of the Royal College of Physicians and Surgeons of Canada, the first-attempt pass rate of McMaster students is higher than the national average. Palmer (1998) describes a large research university he visited where students (under the guidance of a mentor) work in small circles to diagnose and treat real patients. In the words of the dean of the medical school concerned, "Not only did the test scores not decline, but they actually started going up, and during the time we have been teaching this way, they have continued, slowly, to rise. In this approach to medical education, our students not only become more caring but also seem to be getting smarter, faster" (p. 127).
Way of Teaching Discussion As A Democratic Classrooms Tools and Techniques for Second Edition

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