

# Chapter 9a

## Introduction Thinking Critically

The alarm clock goes off. Tanya, a first-year student at Cromwell College, is immediately confronted with the need to make a decision. Possibilities abound: Should she turn off the alarm and go back to sleep, missing her 8:00 A.M. class? Should she let the alarm buzz for awhile, thereby ensuring that she is fully awake but perhaps, in the meantime, awakening her roommate who was up late studying and who has no reason to rise for another hour? Should she vent her frustration at her continual lack of sleep by hurling the clock against the wall? Should she turn the alarm off immediately and, by sheer strength of will, bound out of bed?

This is just the first of many decision-making moments Tanya will face in her day. Indeed, at every minute she will encounter the need to make decisions: some trivial (whether to wear the black socks or the brown ones) and some significant (whether to cheat on her chemistry exam). What does she need to do to make conscious, well-reasoned decisions? What kind of questions should she ask as she assesses the situations facing her?

Tanya needs to be a critical thinker. She needs to evaluate the situations she encounters carefully and thoughtfully. She needs to become familiar with a set of techniques and approaches that will enable her to examine critically not only the texts she reads in her classes, but the everyday events of college life.

### I'M ENTITLED TO MY OPINION

Let's say that Tanya runs into her friend Kevin at the library. He seems upset about something, and Tanya is concerned. When she asks what's troubling him, Kevin blurts out, "I think it's ridiculous the way some professors here take attendance, and count it as part of the course grade. It shouldn't be allowed!"

"Why not?" Tanya asks.

“What do you mean, ‘why not?’” replies Kevin. “It’s just what I believe. After all, it’s a matter of opinion, and I’m entitled to my opinion. Isn’t my opinion as good as anyone else’s? Besides, I feel really strongly about this.”

Whether or not class attendance should be considered in the grading process is indeed a matter of opinion. And although there may be no “right” opinion, some opinions on this issue—and on any issue—can be more convincing than others. Kevin’s opinion may be strongly felt, but in order for Tanya to decide whether she should agree with him, she needs to discover whether his opinion is well-supported. An opinion that cannot be supported rationally is simply not as credible, or believable, as one that can.

Tanya therefore needs to encourage Kevin to go beyond a mere expression of his feelings about the issue at hand, inviting him to explore *why* he feels the way he does. If he can provide a well-reasoned justification for his position, Tanya will be much more likely to go along.

After Tanya insists that Kevin explain his viewpoint in greater detail, he launches into the following statement:

My persnickety sociology professor takes attendance every day, and if you miss a certain number of class meetings, then he takes points off your grade. He’s always whining about how ditching classes shows a careless attitude, and he claims that you can’t do well if you don’t show up. He seems to want to control student behavior like professors decades ago who required college students to attend chapel services. But we’re living in a different age now, and the faculty can’t exert that kind of control anymore. And anyway, I don’t think he’s taking a just approach to grading, because he isn’t dealing with us fairly. In my opinion, as long as you do the work, showing up for class should be irrelevant.

The point is, why should attendance have any impact on our grades? Students like us know we should be able to choose for ourselves whether or not to go to class. We’re smart; we know what we’re doing. We’re in college now, and we’re mature enough to be responsible. Sure, if attendance didn’t count then a few people might skip too many classes and end up not learning the material, but that would just be a small minority. And if we don’t get the opportunity to make mistakes, how will we ever learn to stand on our own two feet? Professors need to either leave the choice of attending classes to us or admit that they don’t want to treat us like adults.

You know, some people may not need to come to class every day—they may be familiar with the subject matter already, or they may be able to learn it just by doing the reading or talking to their classmates. If they can get the papers done, pass the tests, and so on, I don’t see why attendance should have anything to do with their grades. After all, three students missed the review session our sociol-

ogy professor held in the class meeting before our last exam, and these three students all got A's on the exam. It looks like missing class can actually help your course performance!

I've done pretty well on all the written course work so far, too, even though I've been unable to attend at least seven classes. Maybe the professor resents that—I guess it makes him look bad if students can do okay without actually having to be in the same room with him all the time. I have a hunch that's why he's threatening to drastically lower my grade. He's just being malicious and trying to get back at me. It's no surprise that he has such low teaching evaluations. My friend Susan, who's a senior sociology major, says she heard he's really insecure. That makes sense to me, because if he was secure in himself, he wouldn't be so concerned about us showing up.

Actually, lots of Cromwell faculty members agree with me about the attendance issue. Of the four courses I'm taking this semester, the professor takes attendance in only one of them; three out of four just don't see the point of doing it. My roommate Quentin, who's an education major, just did a study for a term paper that shows that most professors in the Education Department don't take attendance either and that there isn't any significant difference in grade distributions between the professors who count attendance and the ones who don't. My sociology professor is just out of step.

Using attendance as a factor in grading is like judging people's artistic talent by how much time they spend in the studio. It's narrow and neurotic. Next thing you know, they'll start asking how long it takes us to do the assigned reading and give higher grades to people who take longer!

Kevin has certainly moved beyond his initial remark that "it's a matter of opinion, and I'm entitled to my opinion." Now Tanya needs to approach Kevin's explanation of his position closely and critically in order to determine whether it is well-reasoned and well-supported.

## WHAT'S THE POINT?

One of the first questions Tanya needs to ask as she examines Kevin's statement is, "What's the point?" In other words, what is the central **issue** under discussion? Once she figures this out, she can then investigate the **thesis** being offered concerning the issue at hand. The thesis is the message being conveyed or the position being taken; it is what an author or speaker is trying to prove.

Tanya should be able to identify the issue at stake here: Should class attendance in itself have an impact on a student's course grade? Kevin, after all, makes it fairly easy for her to locate the main issue by highlighting it at the beginning of the second paragraph with the key phrase "The point is. . ."

Tanya should also be able to identify Kevin's thesis concerning the issue: Showing up for class—or not showing up for class—should in itself have no bearing on the grading process (“as long as you do the work, showing up for class should be irrelevant”). In some cases, a thesis may not be apparent until the conclusion of a discussion, but Kevin provides Tanya with a strong sense of direction by stating his thesis at a relatively early point in his presentation. He again gives her a tip-off phrase (“In my opinion. . .”) that serves as a handy signpost to indicate that he is about to identify his position on the issue. Even without such indicators, however, Tanya—if she is to approach Kevin's presentation critically—must be able to locate his thesis before she can proceed to evaluate the reasoning he uses to support it.

### SO WHAT?

Before she invests too much time in discussing the issue with Kevin, however, Tanya needs to ask another set of questions: Is this a **significant** issue? Is the matter at hand really meaningful to her? Is it worth her time and energy? Is it just Kevin's pet peeve, or does it have larger importance? Could engaging in this discussion bring her to any new realizations? Could she learn something?

All right, Kevin's sociology professor takes attendance into account when assigning course grades—so what? Why should Tanya care? If she can't think of any reason why she *should* care, then maybe she needs to change the subject. If, upon reflection, she decides that the issue does have some importance for her, then she should continue to examine Kevin's statement.

After listening to Kevin's initial presentation of his views, Tanya may reflect upon her own classroom experiences and the ways in which counting attendance might be having an impact on her behavior—or her grades. She may perceive a problem of inconsistency, with some professors valuing attendance and others not, leading to inequities in expectations and student responsibilities. She may wonder whether it is fair to have no difference in grades between the student who shows up for every class and the one who relies on her roommate's lecture notes to get her through the course. Any of these considerations could be enough to convince her that the issue Kevin has raised is indeed a significant one.

### IS THAT A FACT?

Kevin's conclusion is supported by a set of **reasons** that explain *why* he believes in his thesis. For instance, one of Kevin's reasons for discounting attendance is that some students may not need to attend class meetings because “they may be familiar with the subject matter already, or they may be able to learn it just by doing the reading or talk-

ing to their classmates.” The thesis and all the reasons supporting it work together to constitute Kevin’s **argument**.

Throughout his argument, Kevin makes a number of **claims** or assertions about the way things are or the way they ought to be. A claim that is intended to describe the way things actually are is a **descriptive claim**. Kevin makes a descriptive claim when he maintains that “we’re living in a different age now”—he is saying something about what he perceives to be the current reality. A **prescriptive claim**, however, goes further; it offers a suggestion for the way things ought to be, as when Kevin says, “we should be able to choose for ourselves whether or not to go to class.”

Descriptive claims can often seem like statements of fact, but Tanya needs to assess whether Kevin’s claims are indeed factually based. For example, Kevin says that one reason why class attendance should be irrelevant in grading is because “we’re mature enough to be responsible.” Kevin may believe that he is describing reality when he makes this assertion. But is it actually a fact? A **fact** is something that is known to be true, something that has been verified. A **tentative truth** is something that *may* be true, but that still awaits verification. An **opinion** is something that may be *believed* to be true, but that is questionable or debatable. Where, among these possibilities, does Kevin’s claim fall? Has it been solidly verified that college students are generally mature and responsible? If not, what kinds of tests or studies would need to be conducted to establish the truth of this claim? Is such a claim even verifiable?

Tanya needs to determine the extent to which Kevin is going beyond logical, factually based reasoning and using strategies simply to affect her feelings. For instance, Tanya, like Kevin, is a college student; he may be trying to use their shared position (“we’re in college now”) in order to engage her support for his cause. She needs to remain critically aware of such techniques in Kevin’s argument.

## PROVE IT!

Tanya can gain a clearer sense of the effectiveness of Kevin’s argument by assessing the **evidence** he provides in support of his claims. If Kevin wants one of his assertions to be convincing, he needs to prove it by backing it up with credible evidence. What kind of evidence does he provide to ground his claims, and how credible is it?

In fact, Kevin offers various types of evidence, including personal experience and individual example, intuition, appeal to authority, and a research study. Tanya must evaluate *all* forms of evidence in Kevin’s argument to determine its credibility.

To begin with, Kevin provides his own **personal experience** to support his case: he has “done pretty well” in his course work even

though he has missed a number of classes. Tanya needs to consider whether Kevin's view of his own experience is really an objective one—he may think he has “done pretty well,” but would his professor agree? Would Tanya herself agree? What exactly constitutes “doing well” for Kevin—getting A's, getting B's, or getting passing grades?

Tanya also must think about whether Kevin's experience is necessarily representative or typical of the experience of all students. Kevin may have been able to do well without attending class because his roommate is also taking the class and has been generously sharing his notes with Kevin—but would that necessarily be the case for every student? Whenever someone offers a specific **example** or **case study** of a single individual's experience (whether it is their own experience or the experience of another), the question of whether or not the experience is representative must be addressed.

After Kevin asserts that he does not need to attend all of his classes in order to complete the course work successfully, he goes on to claim, “Maybe the professor resents that—I guess it makes him look bad if students can do okay without actually having to be in the same room with him all the time.” Expressions such as “maybe,” “I guess,” and “I have a hunch” that appear in Kevin's statement suggest that he does not know *for a fact* that the professor feels this way; he merely infers it based on his **intuition**. Intuition may help us to identify points that could benefit from further development and support, but intuition can never be a substitute for concrete evidence.

Kevin appeals to external **authority** when he cites the information provided by his friend Susan, a senior sociology major: “she heard he's really insecure.” But is Susan a credible authority on this issue? Although her presence in the sociology department may give Susan some acquaintance with its faculty members, does it really endow her with enough **expertise** (special knowledge about the subject) to determine that Kevin's professor is insecure? In fact, Kevin himself notes that this is just something that Susan has “heard”—a point which may do even more to call her credibility into question. If Kevin were to somehow come across the notes taken by his professor's psychotherapist detailing the professor's long-standing struggle with feelings of inadequacy, he would have a much stronger authority for his claim. The psychotherapist would of course have much more extensive knowledge of the professor and his problems than Susan would, and the psychotherapist's skills, experience, and education would make him a much more credible expert on the issue of insecurity than Susan is at the moment.

Kevin appeals to another sort of authority when he brings up his roommate Quentin's term paper, a **research study** that he offers as evidence to corroborate his reasoning. Tanya should examine a number of factors in reference to this study. First of all, she may wonder about

the qualifications and expertise of the researcher, as well as his neutrality. Is a college senior necessarily the most authoritative source on this subject? Does he have sufficient training and experience to develop and carry out a complex research project? Is it possible that Quentin's own position as a student has affected his **perspective**—perhaps even determining the approach he is taking, the questions he is asking, and the interpretations he is drawing from the data collected? Would he have a different perspective on the professors he is studying if he were a fellow professor rather than a student?

Tanya also may question the credibility of a single, rather limited research study. Is the **sample** (the selection of people studied) large, broad, and representative enough? What percentage of the total Education Department faculty did Quentin survey, and how many individual professors were involved? If there are only four professors in the department and Quentin surveyed three of them, he may have ended up covering three-quarters of the department, but three professors is simply too small of a sample to be statistically significant.

In addition, Tanya should consider whether Quentin's **focus** on the Education Department might make it difficult to appropriately apply his findings to consideration of attendance and grading in other departments, such as sociology. Might there be factors relating to education courses in particular (for example, small class size) that could make the taking of attendance unnecessary?

When assessing the legitimacy of any research study, it is important to investigate whether the study has been **replicated** by other researchers. If Quentin is the only person to have ever explored the possible correlation between taking attendance and grade distributions, the results of his study could appear to be idiosyncratic. However, if other researchers have conducted similar studies—and especially if their studies have demonstrated the same findings as Quentin's—then the credibility of Quentin's research would be enhanced.

Of course Tanya must not forget to assess the **relevance** of this study to the matter at hand. Quentin's study apparently determined that "there isn't any significant difference in grade distributions between the professors who count attendance and the ones who don't." Assuming that Quentin's conclusion is correct, this could be an interesting finding, as it suggests that students in general end up with similar grades whether or not attendance is taken into account. But what bearing does this have on the issue of whether or not attendance *should* play a part in course grading? Tanya must be careful not to allow a descriptive claim (Quentin's conclusion that counting attendance has no significant impact on grading patterns) to distract her from Kevin's prescriptive claim about what he believes *ought* to be happening regarding attendance and grading.

## CHECK THE NUMBERS!

Tanya also needs to take a closer look at the **statistics** Kevin offers in support of his argument; specifically, the statistical evidence (“three out of four professors”) in the fifth paragraph of his statement. Is this figure a convincing component of Kevin’s reasoning? There’s something about numbers that often seems to give them an aura of truth. Tanya can’t really argue with the fact that Kevin is taking courses with four different professors, and that three of them do not take attendance. However, she needs to consider whether Kevin’s sample (the four professors he happens to have this semester) is too limited to be persuasive. Would Kevin’s argument be more convincing if he supported his claim with a survey of *all* the college’s professors, indicating that 75 percent of them do not take attendance? What about a survey of thousands of college professors nationwide?

Does it even matter how many professors do or do not take attendance? If what Tanya is trying to evaluate is whether or not attendance *should* be a component in professors’ grading criteria, is it really relevant to assess to what extent it *is* a component? Once again, we may have a confusion between the descriptive and the prescriptive. The statistical evidence in this case may help to establish a descriptive claim about what professors *do*, but it does not really address Kevin’s prescriptive claim about what professors *should* do—unless Kevin can also succeed in convincing Tanya that all professors should simply do what the majority of their colleagues do.

## WHO SAYS?

No matter how much evidence Kevin provides, Tanya needs to make sure that the sources of his evidence are reliable. We have already seen that there may be questions about the credibility of Susan and Quentin as authoritative, dependable sources. We’ve noted, for example, that Quentin’s position as a student may lead to a particular **bias** or slant in his approach to his research study—whether or not he himself is aware of this.

In fact, Kevin’s own credibility could be called into question as well. He admits, in the fourth paragraph of his statement, that his sociology professor is threatening to lower Kevin’s grade because of repeated absences. Is it possible that this threat has affected Kevin’s perspective on the issue of attendance as a component of grading? Is it possible that Kevin’s sudden attention to the issue of attendance and grading has been directly caused by this threat, and that his argument grows out of his own **vested interest** in the matter? Does his argument constitute a rational, disinterested exploration of the issue, or is it merely a vehicle for him to complain about his own personal situation? Tanya needs to consider the extent to which Kevin’s personal involvement may undermine the credibility of his presentation.

## WHERE ARE YOU COMING FROM?

Kevin's approach to the subject may be governed by his unspoken thoughts concerning higher education in general. In order to determine where Kevin is coming from; Tanya needs to explore what Kevin does *not* explicitly express: the **assumptions** he takes for granted about how the world is or should be. Once she can uncover these unspoken assumptions, she will be able to determine whether or not she believes these assumptions to be legitimate. If she does not, then she will have a hard time agreeing with the claims that are built upon the foundations of Kevin's assumptions.

For example, Kevin asserts that "as long as you do the work, showing up for class should be irrelevant." There are a number of unspoken assumptions underlying this claim. One of the most significant is that "the work" of a course is what is done outside of regular class meetings—papers, exams, problem sets, lab reports, and other out-of-class assignments. Kevin's reasoning can proceed only by conceiving of "course work" as something that is not undertaken in class. If Tanya were to consider participation in class discussion or taking notes on a lecture as part of the work of a course, then it would be more difficult to agree with Kevin's conclusion that "showing up for class should be irrelevant." Kevin's **descriptive assumption** concerning what course work *is* governs his entire argument.

Kevin also makes a number of **prescriptive** or **value assumptions** about how things *ought* to be, and these, too, govern his argument. For instance, Kevin asks this question: "And if we don't get the opportunity to make mistakes, how will we ever learn to stand on our own two feet?" Here he presupposes that learning "to stand on our own two feet" is a valuable component of a college education. If Tanya does not agree that this is part of what college students *should* be learning, then she will be unconvinced by Kevin's reasoning.

## SAY WHAT?

Because of the assumptions he makes and the biases he brings to the issue at hand, Kevin's language may not always be as neutral or precise as it could be. Tanya would be well advised to look closely at Kevin's choice of specific words and phrases.

Some of the words Kevin uses are obviously **slanted**. For instance, he refers at the beginning of his argument to his "persnickety" professor's "whining," and he uses the word "neurotic" in a pejorative or negative sense at the very end of his statement. At other points, the slanting of terminology is a bit more subtle. For example, Kevin says that his professor "claims that you can't do well if you don't show up." By using a word such as "claims" (rather than, say, "states"), Kevin conveys a sense of questionability, suggesting that what the professor says is opinion rather than fact and is therefore open to doubt.

In some cases, Kevin's use of loaded language can be characterized as **euphemism** or **dysphemism**. A euphemism is a gentle or positive-sounding word or phrase that may be used to soften a harsh or negative meaning. For example, when speaking of the sociology classes he has missed, Kevin refers to them as classes he has "been unable to attend." Stating the case in this way enables Kevin to deflect blame from himself, subtly suggesting that he would have eagerly attended all the classes had he not been unavoidably detained. Dysphemism—the opposite of euphemism, and so the use of harsh or negative language—can be seen when Kevin reports on his professor's attitude toward students "ditching" classes. The accusatory tone of the word "ditching"—implying that students are simply tossing their educations overboard—contributes to Kevin's characterization of his sociology professor as cranky and out of touch.

In all cases, whether the loaded language is subtle or overt, Tanya must think critically about the effects of Kevin's specific terminology, looking beyond the mere **denotation** of a word (its explicit meaning or definition) and taking into account its potential **connotations** (the meanings associated with or suggested by it). For instance, when Kevin speaks of "the opportunity to make mistakes," he uses the word "opportunity" to connote a beneficial, favorable chance for self-improvement. Making mistakes is thus presented in a positive light.

Tanya should also be aware that many of the words Kevin uses are **ambiguous**—they may have multiple meanings, or they may simply be vague and undefined. For example, in his second paragraph he characterizes college students as "mature enough to be responsible." What exactly do words such as "mature" and "responsible" mean here? Could they have different meanings for different people? Could they have different meanings in different contexts? How mature is "mature enough"? Can levels of maturity be measured? How can responsible behavior be defined or assessed? What about words like "just" and "fairly," which Kevin uses in the first paragraph of his statement? What might it mean to act in a just or fair manner? Tanya may want to insist that Kevin define his terms more clearly and precisely.

## **RUN THAT BY ME AGAIN!**

So far Tanya has come across a number of areas in which Kevin's argument could bear further examination. As she investigates possible weaknesses in his reasoning, she may want to run through a checklist of common logical **fallacies**—flaws in reasoning that can seriously undermine the credibility of an argument.

**1. Emotive language:** As we have already seen, Kevin has a tendency to depend on emotional appeals and emotion-laden language. Specific logical fallacies that fall under the category of emotive lan-

guage include appeals to fear, pity, flattery, and peer pressure. For example, Kevin uses flattery when he says, "We're smart; we know what we're doing." He appeals to the vanity of his student audience in order to draw them into his argument.

**2. False dilemma:** Sometimes called the "either-or" fallacy, this describes the strategy of presenting only two extreme alternatives and excluding any middle ground. Kevin does this when he says, "Professors need to either leave the choice of attending classes to us or admit that they don't want to treat us like adults." Are those really the only available options?

**3. Slippery slope:** Often presented in the form of an "if-then" or "the next thing you know" statement, this fallacy suggests that if one thing happens, something else will necessarily follow. This may also be familiar as the "domino theory" or "ripple effect." We can see Kevin making use of this approach at the end of his argument: "Next thing you know, they'll start asking how long it takes us to do the assigned reading and give higher grades to people who take longer!" The problem is that we have no logical reason to believe that the first thing (using attendance to determine grades) will necessarily lead to the second (using length of reading time).

**4. Circular reasoning:** Sometimes described as a form of "begging the question" (that is, avoiding the issue), circular reasoning moves—as you might guess—in a circle. In other words, the justification of a claim is simply a restatement of the claim itself in a slightly altered form. When Kevin says, "I don't think he's taking a just approach to grading, because he isn't dealing with us fairly," his explanation simply proceeds by the use of near-synonyms: the approach isn't just because it isn't fair. Has he really explained anything?

**5. Ad hominem:** From the Latin phrase meaning "to the person," this fallacy uses a personal attack on an individual as a substitute for a reasoned critique of the individual's position. When Kevin refers to his sociology professor as "persnickety" and "insecure," and when he says, "He's just being malicious and trying to get back at me," he is engaging in ad hominem attacks.

**6. Ad populum:** From the Latin phrase meaning "to the people," this fallacy makes an appeal to the shared values or beliefs of the audience, playing on people's natural desire to be part of a group. Kevin uses this strategy in the second paragraph of his statement when he refers to what "students like us know."

**7. Common practice:** Here the appeal is not to popular beliefs, but to popular behavior—an "everyone is doing it" or "bandwagon" approach. When Kevin argues that three of his four professors do not take attendance and that, according to Quentin's study, most education professors do not take attendance either, he seems to suggest that the majority behavior is the norm, and that his sociology professor's policy is an aberration which should be rectified.

**8. Red herring:** This fallacy involves distraction—using an unrelated point to distract the audience’s attention from the real issue at hand. Its name derives from the old practice of using a dead fish to distract dogs from the scent of their prey. One “dead fish” in Kevin’s argument can be found when he refers, in his fourth paragraph, to his sociology professor’s “low teaching evaluations.” What does this point have to do with the issue of using attendance as a factor in grading?

**9. Straw man:** When the arguments of the opposition are exaggerated or distorted and then attacked, we end up with a “straw man” that is easily knocked down. In his opening paragraph, Kevin says that his sociology professor “seems to want to control student behavior like professors decades ago who required college students to attend chapel services.” He then continues, “But we’re living in a different age now, and the faculty can’t exert that kind of control anymore.” Is Kevin necessarily giving an accurate portrayal of his professor’s position when he talks about what his professor “seems to want”? When he makes the point that “we’re living in a different age now,” is he rebutting his professor’s actual position, or merely an imaginary position that Kevin himself has created?

**10. Generalizations:** Frequently signaled by such words as “all,” “every,” “always,” “never,” and “none,” **broad generalizations** or **overstatements** are unqualified statements about all members of a category or group. Stereotyping is one form of overstatement. A conclusion based on a limited or unrepresentative sample is a **hasty generalization**. We see Kevin falling into this fallacy when he provides the “three out of four professors” statistic and draws the conclusion that “lots of Cromwell faculty members agree with me about the attendance issue.” Based on his sample of only four professors, can he legitimately draw a conclusion about the views of “lots of Cromwell faculty members”?

**11. False analogy:** An **analogy** is a comparison that highlights the resemblance or similarity between two different things. When evaluating the soundness of an analogy, we need to examine how similar the two things being compared actually are and how significant the similarities may be. False analogies are sometimes referred to as “comparing apples to oranges.” In the final paragraph of his statement Kevin says, “Using attendance as a factor in grading is like judging people’s artistic talent by how much time they spend in the studio.” Is grading a student in a particular course really comparable to judging artistic ability? Is attending class really comparable to spending time in an art studio?

**12. Post hoc:** Sometimes referred to as “false cause” reasoning, this fallacy takes its name from the Latin phrase *post hoc ergo propter hoc*, meaning “after this, therefore because of this.” The suggestion is that there is a cause-effect relationship between two events simply because one came first. We can see this reasoning in Kevin’s third paragraph: “After all, three students missed the review session our

sociology professor held in the class meeting before our last exam, and these three students all got A's on the exam. So it looks like missing class can actually help your course performance!" The implication is that the students got A's on the exam *because* they missed the prior review session—but of course the two events could be entirely unrelated.

**13. Non sequitur:** In Latin, this means "it does not follow." It can refer to any portion of an argument in which the reasoning simply does not connect or make sense; for example, when Kevin says that if his sociology professor "was secure in himself, he wouldn't be so concerned about us showing up." What exactly is the link between the professor's possible insecurity and his grading policy? It may make sense to Kevin, but the connection may not be clear to anyone else.

## WHAT'S MISSING?

Tanya needs to consider not only whether the argument Kevin presents is flawed or slanted, but whether he is leaving out any important factors. Altogether, Kevin may be presenting a rather limited view of the issue. Are there **alternative interpretations** of the information he has offered? For example, Kevin notes that three of his professors this semester do not take attendance, and leads us to the conclusion that they do not do so because they do not think it is a legitimate component of grading. But could it instead be because their courses are so hugely enrolled that attendance-taking would be difficult—or because their classes are so small that officially taking attendance would not be necessary in order to determine who is present? Could it be due to the nature of their courses, their goals and methods as teachers, or even their laziness?

Tanya also needs to consider whether there may be any **negative consequences** to Kevin's view that he neglects to mention. Kevin himself admits that "if attendance didn't count then a few people might skip too many classes and end up not learning the material," but he claims that this would involve only "a small minority" of students. Even if it were only a small minority, an impact might still be felt on class participation, the professor's ability to connect with students, and the morale of those students who do attend class regularly—not to mention the possibility that faculty members might find their office hours taken up by students who have missed class and require a further explanation of course materials.

There are many more weaknesses in Kevin's argument than we have so far explored. Tanya would do well to undertake further examination of his presentation, attempting to uncover additional examples of problems with his reasoning. Once Tanya has fully evaluated Kevin's argument, she will be ready to reply with an argument of her own. She will be able to use her evaluation of Kevin's argument to build her case, for an awareness of the flaws in his reasoning will enable her to avoid such flaws herself.

## PLAY IT AGAIN

Just to make sure that she has fully absorbed a critical-thinking approach, Tanya might want to examine another argument. She had an excellent opportunity to do so the day after her conversation with Kevin about class attendance and grading. As she settled into her favorite seat near the back of her English composition classroom a few minutes before her class was scheduled to begin, she overheard two of her classmates, Elise and Dalton, engage in the following discussion:

"Don't you think that T-shirt you're wearing is tacky?" asked Elise.

"Why should I think it's tacky? I'm showing my school spirit! Don't you support the Cromwell Chiefs?" Dalton replied.

"I have nothing against our athletes," Elise explained, "but I do have a problem with the school's mascot, especially the way he's portrayed on your T-shirt—feathers, war paint, and tomahawk in hand. I've taken a couple of courses here at Cromwell about Native American literature and culture, and I know that the image on your T-shirt doesn't reflect reality. It's a representation of every possible mindless cliché that's been perpetuated since white folks first came into contact with indigenous peoples. Just calling the athletic teams 'the Chiefs' is bad enough; the name alone gives a limited, stereotypical view of Native Americans. And when you associate that name with the cartoonish figure on your T-shirt, it's even worse. It makes Cromwell look like we're out of step and behind the times—honestly, I'm totally humiliated whenever my friends at other schools see a Cromwell T-shirt."

"Oh, come on, Elise. First of all, it's just a picture. Why make such a big deal over it? And what's wrong with calling our teams 'the Chiefs'? It's a positive image, after all—noble, courageous, in charge. It helps us here at Cromwell feel proud of our school and our athletes. Besides, it's a name that's been associated with our athletic program for generations, ever since Cromwell was founded. You can't change that kind of long-standing tradition—the alumni would never go for it. I ought to know—my father is an alumnus, and I can guarantee you he'd be furious if they changed the team name. Anyway, all you need to do to get a clue about alumni opinion is to read the letters to the editor in Cromwell's alumni magazine; it seems like three-fourths of them point out all the ways the college is changing for the worse. What would you want to change the name to, anyway? Something nice and sweet like 'the Cromwell Chrysanthemums'? A team name is supposed to connote strength, victory, and power. A word like 'Chiefs' does that perfectly."

"But it's not the only powerful choice," Elise pointed out. "We could be 'the Cromwell Cougars,' for example, which at least wouldn't be offensive. I've never heard of anyone on any campus objecting to a name like that."

"How do you know? Probably some animal rights fanatics out there would have a problem with it," Dalton said. "Wasn't there a big

blow-up at Reston College when they named their newspaper *The Reston Roadkill*? I remember my roommate telling me something about that . . .”.

“Now you’re just being dumb. I don’t know why I listen to anything a jerk like you has to say about serious issues.”

At that point the professor entered the classroom. The conversation ceased, but Tanya continued to think about what she had overheard. She knew there were a number of points she needed to consider as she pondered Elise and Dalton’s interchange.

- **What’s the issue at hand and what is the thesis being presented?** What exactly is the point of the discussion: the alleged tackiness of Dalton’s T-shirt or the larger issue of associating a college team with a specific cultural image or artifact? Although Elise begins by focusing on the T-shirt, her subsequent statement (“I do have a problem with the school’s mascot”) begins to clarify the issue as well as Elise’s position on the issue.
- **Is it significant?** Does Tanya care enough about this issue to spend any more time thinking about Elise and Dalton’s exploration of it? As a Cromwell student, Tanya may indeed want to consider potential problems with the images the college uses to represent itself.
- **Is there a factual basis for the claims being made?** For example, when Dalton asserts that Cromwell alumni “would never go for” a change in the team name, is he stating a fact? Has his assertion been verified? What procedures would be necessary to establish verification of such an assertion?
- **What kind of evidence is being provided in support of the claims?** When Elise notes that she has “never heard of anyone on any campus objecting” to animal names being used for athletic teams, is she providing adequate concrete support to back up her assertions? Just because she herself hasn’t heard of objections, does that mean that they do not exist?
- **Is the use of statistics or other numerical evidence credible?** What should Tanya make of Dalton’s point about three-fourths of the letters to the editor in the alumni magazine pointing out “all the ways the college is changing for the worse”? Is this a legitimate use of statistical evidence? Might the phrase “it seems like” introducing this evidence raise questions about the accuracy of Dalton’s “three-fourths” figure? Are letters to the editor necessarily a representative sample of alumni opinion? Is it possible that people are more likely to make the effort to write a letter when they feel the urge to complain?
- **How credible are the speaker and the sources cited?** Are Elise and Dalton presenting themselves, and the other sources they cite, as

credible? For instance, when Elise points out that she's taken a couple of college courses dealing with Native American culture, is this enough to establish her as an authoritative figure? When Dalton asserts that he "ought to know" about alumni opinion because his father is an alumnus, has he provided sufficient support for his presentation of himself as an authority? Does Dalton give Elise any reason to believe that his roommate is a credible source for information about events at Reston College?

- **What assumptions underlie the claims being made?** What do Elise and Dalton take for granted? What perceptions or attitudes govern the ways in which they view the issue at hand? For example, what do they each seem to assume about the function of a college team mascot? Elise's embarrassment when her friends at other colleges see the Cromwell mascot may suggest that she views the mascot as a vehicle for representing Cromwell to the outside world; Dalton's focus on the positive emotions that the name "Chiefs" can generate among Cromwell students and alumni may suggest that he views the mascot as a source of internal collegiate pride. Might these differing assumptions lead to differing perceptions of the image on Dalton's T-shirt?
- **Is the language that is being used loaded or slanted in any way?** Do any ambiguous words or phrases appear in the discussion? How does Elise's use of a phrase such as "mindless cliché" or an adjective such as "cartoonish" affect the message she is conveying? What is the connotation of Dalton's reference to the "long-standing tradition" of the Cromwell team name? What exactly is meant by the expression "school spirit"? Could it mean different things to different people?
- **Are there any logical fallacies in the argument?** Examples can be found throughout the discussion of such fallacies as emotive language ("Don't you support the Cromwell Chiefs?"), false dilemma ("What would you want to change the name to, anyway? Something nice and sweet like 'the Cromwell Chrysanthemums'?"), ad hominem attacks ("I don't know why I listen to anything a jerk like you has to say about serious issues"), or false analogy ("Wasn't there a big blow-up at Reston College when they named their newspaper *The Reston Roadkill*?")? Can you spot any other logical fallacies?
- **Is anything important being left out of the presentation?** Are Elise and Dalton neglecting to consider alternative interpretations or negative consequences? For example, is it possible that changing the team name and mascot could result in a reduction of alumni donations to the college? Is it possible that keeping the name and mascot could stimulate protests and generate negative publicity for the college?

After exploring each of these issues in some depth, Tanya will have a much fuller understanding of the arguments that Elise and Dalton are

presenting. As she did with Kevin's argument, she will be able to evaluate the positions being presented to her and at the same time construct a position of her own that is clear, coherent, and convincing. Tanya will be able to do this effectively because she has learned to think critically.

## ONE MORE TIME

See if you, like Tanya, can think critically about college life by examining the following argument presented by Tanya's friend Hope.

I know a lot of people who whine and complain about the children of alumni having an easier time getting into Cromwell than other applicants. I've heard from a friend of mine who does work-study in the admissions office that the average applicant to Cromwell has a one in ten chance of being admitted, but alumni children—they call them "legacies"—have a four in ten chance. Some people think that's an unfair advantage, but I don't agree. I think legacies *do* deserve extra attention from the admissions office. My dad is a Cromwell alumnus, so I know about this firsthand.

Legacy applicants are more likely to do well when they get to Cromwell, because they understand what the college is all about. They know the old traditions and have a stronger feeling of school pride. They feel committed to Cromwell because of their family connection to it, so they won't want to do anything to jeopardize their success here. They probably have higher retention rates, because legacies won't ever want to transfer to another school. Besides, if your parents graduated from Cromwell, that means they must have been smart—which means that you're smart, too, so you deserve a greater chance of admission to the college. The students I know who happen to be children of Cromwell alumni are all pretty intelligent. I'm afraid I can't say the same for Cromwell students in general.

And we shouldn't forget that legacies aren't the only ones who get favorable treatment in the admissions process. Cromwell gives special consideration to other groups, too: athletes, underrepresented minorities, students with special artistic or musical talents, and so on. Why not add alumni children to the list?

The real clincher, though, is that alumni children, when they become alumni themselves, are going to be major donors to the college. The more of a family tradition you have of being connected to the school, the more likely you are to make major financial contributions. In Cromwell's alumni magazine, I read about a research study that showed that in their first two years after graduation, 78 percent of legacies donated a total of \$100 or more to Cromwell. Only 36 percent of non-legacy graduates donated \$100 or more in their first two years out. Like most colleges, Cromwell depends on alumni support to raise funds. If we cut down our number of legacy admissions, what would happen to the college budget? We might not even be able to keep things running! I guess that's why most private colleges across the country admit alumni children at higher rates—Cromwell is just doing what all the other colleges do.

I think the people who complain about legacy admissions are jealous and mean-spirited. They need to calm down and take a longer view of things. After all, their children will be able to benefit from the legacy admission advantage as well.

- **What's the issue at hand, and what is the thesis being presented?** Can you identify the topic under discussion, as well as Hope's position on the topic? Is there a particular sentence in Hope's statement that encapsulates her thesis?
- **Is it significant?** Do you care about this issue? If so, why? If not, why not?
- **Is there a factual basis for the claims being made?** You might want to focus on the several claims that Hope makes in the second paragraph of her statement. Are these assertions facts, tentative truths, or opinions?
- **What kind of evidence is being provided in support of the claims?** Does Hope make effective use of personal experience, research studies, and other forms of evidence?
- **Is the use of statistics or other numerical evidence credible?** What do you make of the numerical data that Hope introduces in the first paragraph, or the statistical overview of legacy and non-legacy donations that she cites in the second-to-last paragraph?
- **How credible is the speaker as well as the sources cited?** Does Hope's position as the daughter of an alumnus enhance her authority, or does it undermine her credibility? Is her friend who has a work-study job in the admissions office an authoritative source?
- **What assumptions underlie the claims being made?** For example, try to identify the assumptions about intelligence that Hope seems to be making in the following statement: "Besides, if your parents graduated from Cromwell, that means they must have been smart—which means that you're smart, too, so you deserve a greater chance of admission to the college."
- **Is the language that is being used loaded or slanted in any way? Do any ambiguous words or phrases appear in the discussion?** What kind of message is being conveyed in the phrase "whine and complain" that appears in the very first sentence of Hope's statement? What about "school pride," which she uses in her second paragraph—could it be open to a variety of interpretations?
- **Are there any logical fallacies in the argument?** Can you find any instances of false analogies, ad hominem attacks, slippery slope reasoning, appeals to common practice, or any other fallacies in Hope's statement?

- **Is anything important being left out of the presentation?** Can you think of any alternative interpretations of the information Hope provides—for example, the study of legacy and non-legacy donations? Can you think of any negative consequences of favoring alumni children in college admissions?

Sometimes it's easier to criticize someone else's flawed presentation than to think of ways to convey a position effectively, but you may be able to develop your critical thinking powers more fully by considering the ways in which Hope could have strengthened her case. How could she have presented her case more convincingly? What could she have done to create a more logically reasoned and solidly supported argument?

## ON YOUR OWN

Here are two statements recently presented by Cromwell students in an open forum on campus issues. How would you approach these statements now that you are learning to think critically?

**1. Athletic Support:** Fellow students, we have some serious problems with fairness and equity here at Cromwell. We're all here to get an education, to fulfill our academic potential—or at least that's why we're supposed to be here—and one thing I just can't tolerate is a college system that seems to give special privileges to people based on anything but their academic achievement. I can see the value of giving extra attention to students who are highly talented in music or art, because those are areas that contribute to the educational mission of the college. But I'm fed up with the special consideration that athletes seem to get here, especially in the matter of tutorial support. It's unfair to everyone else and inappropriate in an institution of higher learning.

From the very beginning, we have unfairness in the admissions policies, which give favorable consideration to star athletes. Sure, the folks in the admissions office say that no one gets accepted to Cromwell unless they meet the college's academic criteria, but don't we all know students who would definitely never have gotten in here if not for their athletic abilities? Face it, even though they sometimes call them "scholar-athletes," the sports stars who get admitted to Cromwell aren't exactly intellectual giants.

And then when they get here, they get all sorts of academic perks that the rest of us regular students don't have access to. Never mind all the rumors about gifts and favors and wining and dining. Let's talk about tutoring! I would never even have known about the special academic tutoring services that athletes have if not for the fact that my roommate is on the soccer team.

I want to tell you about one of my personal experiences to illustrate the problem. My roommate, the soccer player, and I are both taking the same anthropology class this semester, and if you've taken Anthro. 317 you know it's not an easy course. Well, I've done my best to get through it, working like crazy to do all the reading and pass the exams and finish the impossible papers that we have to write. About halfway through the term I was really struggling with one of the writing assignments, and even after going to talk to the professor I was still totally lost. I went to the Academic Assistance Center to see if I could get one of the tutors there to help me figure out how to approach writing the paper. Well, anthropology is not such a popular field, so there was only one tutor who could help, and she was fully booked until days after the assignment was due! I did my best on my own and ended up getting a C+ on the paper.

That would have been the end of the story if I hadn't witnessed the totally different experience with this assignment that my roommate had. You may know that there's an office here at Cromwell called Athletic Support Services. My roommate has a counselor there who helps him with all his academic and personal problems. I wish I had someone like that! Anyway, on the day before the paper was due he went and told his counselor about the difficulty he was having with the anthro. assignment. She called around and quickly found a senior anthro. major who spent four hours with him that afternoon explaining the assignment and helping him get his ideas together for writing the paper. With assistance like that, he was able to get an A- on the paper!

This isn't just a fluke occurrence, either. I went with my roommate to soccer practice one day and asked around among his teammates. It turns out that of the nine players I talked to, seven had gotten last-minute tutoring assistance through Athletic Support Services this semester alone. This is simply unfair, since non-athletes don't have this option.

I know I'm not the only one who feels this way. I've heard lots of students complaining about how hard it is sometimes to get to see a tutor at the Academic Assistance Center, and at least one professor has raised concerns about athletes' access to special tutoring services. Remember Prof. Mitchell's letter to the editor in last week's *Cromwell Clarion*? Now I'm asking the rest of you to make your voices heard against this injustice. Either we all need to have access to the kind of academic assistance that the athletes get, or they can suffer through their courses like the rest of us!

**2. Sweatshirts from Sweatshops:** Friends, I know that many of you saw the article in yesterday's *Cromwell Clarion*, revealing the fact that our Cromwell College sweatshirts and T-shirts are manufactured by underpaid and overworked sweatshop laborers. For those of you who might not have heard, let me explain that our campus newspaper conducted an

investigation into the sources of Cromwell's officially licensed college apparel. According to Cromwell's director of auxiliary services, more than 90 percent of the logo merchandise is produced by Transterra Textiles, a garment company which supplies clothing to a number of American colleges and universities. The vast majority of Transterra's college apparel is manufactured in a factory in Honduras which employs primarily women and children who operate under horrific working conditions.

Here are some details about Transterra Textiles' operations. According to a recent report by the WorldWeave Foundation, a nonprofit organization funded by American garment workers' unions, Transterra owns five factories in Third World countries. Its four smaller factories focus on the production of baby and children's wear, although they do produce some college merchandise. Transterra's largest factory, in Honduras, concentrates on college logo apparel and employs 720 workers, of whom approximately 300 are under the age of eighteen. Almost 70 percent of the Honduran workers are female. In a recent tour of Transterra's Honduran factory, WorldWeave observers noticed some children who appeared to be as young as eleven or twelve working with dangerous fabric-cutting machines—in spite of local laws that prohibit anyone under the age of fourteen from doing factory work. All the factory employees, no matter how young, work ten-hour shifts at physically exhausting and mentally deadening jobs, and they are often forced to work overtime. Temperatures in some portions of the factory exceed 100 degrees, air circulation is limited, and there is no safe drinking water available to employees. For this dangerous and degrading work, laborers are paid an average of only 68 cents per hour!

Think about it: a little girl the age of an average fifth grader, working hour after hour without a break amid the deafening roar of machinery, trying to keep up with the rapid pace of production without getting her fingers sliced off, trying not to collapse from heat and exhaustion, earning a pittance for her labor—just so we can buy Cromwell sweatshirts to show off to our friends and families. It's obscene, and it has to stop!

There are two things we can do to put an end to this exploitation. We can demand that Cromwell obtain its logo merchandise only from garment companies with socially responsible labor practices, and we can refuse to wear or purchase any Cromwell clothing until the college switches to an acceptable apparel supplier.

Knowing what we now know, if we continue to wear and buy Cromwell logo apparel we become accomplices in the abusive employment practices of Transterra Textiles. We have a choice: to do what we can in support of global economic justice, or to become the oppressor. I

therefore call upon you to join me in a campaign of letters, e-mails, and phone calls to convince Cromwell's director of auxiliary services to investigate the employment practices of other garment suppliers and to explore possible alternatives. And I call upon you to boycott all Cromwell apparel—not to wear any sweatshirts or T-shirts you may already have, and not to purchase any more—until we see a positive change.