Argumetation is at once a familiar and puzzling concept. It is familiar in the sense that the word is one you know, it probably appears in your conversation occasionally, and, research suggests, you have been making up reasons since you were about four years old. In fact, you still use a lot of the reasons that came to mind when you were just a child (Willbrand and Rieke). As a kid, you probably reasoned on the basis of power authority, “My Mommy said I don't have to eat green beans, so there!” As an adult, you surely still use power authority, although in a more grown-up way, “My advisor says this course will satisfy a major requirement, and she has the power to make that determination.”

Argumentation is puzzling because people so rarely take time to reflect on what they mean and do under the heading of argument or argumentation. If we were to ask a group of people what argumentation means, we would get many different answers, and most of them would be fairly superficial.

The difficult part about studying argumentation is keeping your mind open to new ways of thinking about a familiar process. The objective of this book is to sensitize you
to your own argumentation behaviors and provide new information and insight to help you be as effective as possible.

In the first three chapters, we will offer our perspective on argumentation for your consideration. Subsequent chapters will present information about engaging in argumentation that we expect will provide you with some valuable insights.

We begin by introducing you to the key elements of argumentation. Then we will explain how argumentation is inherent in critical decision making.

Elements of Argumentation

Argumentation is the communicative process of advancing, supporting, criticizing, and modifying claims so that appropriate decision makers, defined by relevant spheres, may grant or deny adherence. Let us briefly discuss the important terms in this working definition.

Adherence

The objective of argumentation, as Chaim Perelman and L. Olbrechts-Tyteca have noted, is to gain adherence, which is the informed support of others (1). By informed, we mean that people who have committed themselves to your claim are consciously aware of the reasons for doing so. By support, we mean that people stand ready to act on your claims, not just grant lip service.

We have said that argumentation is a communication process, which means it involves engaging people's minds through interaction. As we will see in the next chapter, different people make different demands on arguments before committing themselves. The responsibility for decision making is shared, including the responsibility for bad decisions.

Appropriate Decision Makers

The appropriate decision makers are those necessary to the ultimate implementation of the decision. You may win adherence of fellow students to the proposition that the midterm exam should count less than the final paper in grading your class, but if the professor says no, what have you accomplished?

When the George W. Bush administration in the United States initiated a worldwide debate over alleged attempts by Saddam Hussein in Iraq to acquire and perhaps use weapons of mass destruction, the administration appealed to the Security Council of the United Nations for a resolution of condemnation. U.S. Secretary of State Colin Powell presented a detailed argumentative case before the United Nations, and representatives of many other countries entered the discussion. In the end, the resolution was rejected, with such powerful nations as France, Germany, Russia, and China voting no.

In the eyes of many observers, arguments had been properly presented to the appropriate decision makers, and they had decided. The world, it seemed, had rejected war, at least for the time being, and would continue international inspections instead.

However, President Bush formed a coalition consisting mostly of the United States and Britain, and proceeded to invade and conquer Iraq without regard for the decision of the Security Council. This action revealed who the appropriate decision makers were: the leaders of the United States and the United Kingdom. While some continue to argue that the United Nations should have been the appropriate decision makers, the fact is the United Nations lacked the power or authority to insist that its decision be final.

The appropriate decision makers need not be powerful persons. All citizens have a part in implementing some decisions. By participating in public interest groups, by actively participating in the political process and by voting, you can become an appropriate decision maker, regardless of your position, on public questions. When you make an argument, you must address it to the appropriate decision makers if you expect to generate more than lip service.

Because argumentation functions as a social-interactive process and because people's critical decisions are the products of argumentation, we speak of argumentation as audience-centered. The word audience is used in its broadest sense to include all argumentative situations ranging from interpersonal interaction between two people to talk radio or chat rooms on the Internet, from readers of letters to the editor to those who watch C-SPAN.

Spheres

Spheres are collections of people in the process of interacting upon and making critical decisions. The easiest sphere to understand is that group of people who lived together as you grew up. Within that group, rules of interaction were developed and enforced, values were established, acceptable reasons were identified, and the appropriate decision makers emerged over time. People who live together learn how language will be interpreted, establish roles and hierarchies, develop relatively common perceptions of reality, and come to understand what arguments will be respected. Even though children may disagree with their parents or guardians over what counts as a good argument, they usually must adapt to those standards because of their standing in the hierarchy. As you grew up, you established different spheres with peers and other adults where standards of argumentation were different from those enforced in the home. Spheres are explained further in Chapter 2.

Claims

A claim is a statement that you want others to accept and act upon (to grant their adherence). It may be linked to a series of other claims that constitute a case.

When a claim is used to justify another claim, it is called a subclaim. "Watching TV for more than three hours a day makes children aggressive" is a claim. It becomes a subclaim when it is used to justify the claim, "The media should reduce the amount of violence in their shows."

There are three kinds of claims: fact, value, and policy. Later in this chapter we will see how they interrelate and are used to support one another. For now, let us see what they are.
**Factual Claim** A factual claim affirms that certain conditions exist in the material world and could be observed. Decision makers are asked to adhere to a factual claim because it is confirmed by objective data from reliable sources. The following are examples of factual claims:

- Cypress College is in Orange County, California.
- Twenty-four species of animals run faster than humans.
- New Mexico became a state in 1912.
- The percentage of the U.S. population over sixty-five will significantly increase by the year 2020.

These are all factual claims. Each makes a claim that decision makers might verify by reference to some kind of data. The first two are claims of present fact and the third is a claim of past fact. The fourth claim about the U.S. population is worth special note as it is a claim of future fact (Cronkhite). A visit or a website tells you that Cypress College is in Orange County, California, a count found in an almanac confirms there are twenty-four species of animals faster than humans, and a historical record shows that New Mexico became a state in 1912. But, a future fact cannot be confirmed by looking at objective data from reliable sources. Decision makers will require more extensive reasoning to give it adherence. However, it is still a factual claim because at some point you, or someone, will be able to check it by objective data or observation. For instance, current government statistics tell us how many people are over sixty-five years of age today. By examining the percentage of people fifty and over with the general population today you can estimate the percentage who will be over sixty-five in 2020. Eventually, in 2020, you can check it, if you wish.

Nonetheless, whether of past, present, or future, factual claims all have similar characteristics. All make assertions about what a situation was, is, or will be. All can be identified by some variety of the verb "to be." Note the examples above: "Cypress College is ... " "Twenty-four species of animals ... " "New Mexico became ... " "The percentage of the population over sixty-five will be ... " And, all are analyzed in the same way.

**Value Claim** A claim that asserts the quality of a person, place, thing, or idea is called a value claim:

- Natural gas is our best energy source.
- Drugs and alcohol are a threat to public morality.

Both of these statements make claims about the value of something; they make a value judgment that cannot be checked against data. "Drugs and alcohol area threat to public morality" is clearly a value claim. "Public morality" is a condition that can be defined only by the participants in argumentation. It has no generally accepted means of verification. Natural gas, on the other hand, might be shown to have less pollutants, may cost less per BTU than other energy sources, and may have other characteristics that seem to make this claim as verifiable as a factual claim. But best means more than verifiable characteristics. Some people find gas better than electricity for cooking. How is that to be verified? So, value claims may vary from personal choice to definition in the strictest verifiable terms.

The value claim is frequently confused with the factual claim because it has the same form. It is built around some version of the verb "to be." Note the examples above: "Drugs and alcohol are ... " "Natural gas is ... " Furthermore, as we will show later in this book, the value claim is analyzed the same way as is the factual claim. But the value claim can always be distinguished from the factual claim because it has in it a value term ("public morality/immorality," "best/worst," "right/wrong," "just/unjust," "beautifullugly") that contains a judgment that cannot be objectively verified and depends on the decision makers' concepts of what is and what is not of value.

**Policy Claim** A claim that tells someone or some agency how to behave is called a policy claim. Any statement of a rule, law, or regulation is a policy claim and is a proposed change in the way people or agencies currently behave:

- No left turn.
- Don't walk on the grass.
- The balanced budget amendment to the constitution should be passed.
- Medical marijuana use ought to be legalized.
- The United States must control illegal immigration.

Because policy claims have to do with behavior, it will help you to identify them by checking to see if they state or imply the word should. The first two claims do not specifically state "You should not turn left" or "You should not walk on the grass," but they are commands based on policy decisions. The last two policy claims use terms ought and must that mean the same as should.

Note the differences in these three related claims:

- Left turns are against the law at Fifth and Elm streets. (factual claim)
- Left turns at Fifth and Elm are dangerous. (value claim)
- You should not turn left at Fifth and Elm Streets. (policy claim)

All three claims deal with the same subject matter but they are quite different. They require different kinds of analysis and argumentation, primarily because asking for a change of behavior is more than asserting a fact or value.

Notice that a claim is a single statement, but it is possible that you could have a sentence with more than one claim in it. Consider this sentence: "The average composite U.S. College Testing Program score for U.S. high school students is 20.8, a significant drop from twenty years earlier." There is a factual claim about the scores and a value claim about their significance. You may need to separate these two for your analysis.
Issue

The term issue, as frequently used in our society, can be confused with the term claim. A politician will argue, "My opponent has missed the issue; we need a balanced budget amendment." But an issue is more than an important claim. An issue is the clash of two opposing claims stated as a question.

To make analysis more pointed, you should always state issues in a hypothetical form allowing only two responses: yes or no. In this way, the statement of the issue points the response either toward one claim or a continued search.

For example, you might ask, "Are current tuition rates too low?" One person says yes, another says no: there is an issue. Issues are best stated with such words as should, will, does, can, or is because such words clearly imply a yes or no answer. If the decision makers decide the answer is no, it does not mean the discussion of tuition is over; it merely means those interested in change must revise their analysis and open another issue. For example, they might move to the question, "Will higher tuition rates improve our education?"

By the same token, issues never begin with such words as who, what, where, when, why, or how. These and similar words lead to an open-ended question such as, "What is the impact of livestock grazing on federal lands?" The response to such a question is wide open and does not focus the analysis. As you will see in Chapter 4, "What is the impact of livestock grazing on federal lands?" this clash of claims results in an issue of fact.

Many political leaders in western states oppose wilderness designation for federal lands because that will restrict the economic development of those lands for livestock grazing, mining, and logging. Environmental groups favor a greater designation of wilderness to preserve more land in the natural state. They claim: "More federal land should be designated as wilderness." Others argue against such designation. Here, then, is a policy issue: "Should more public land be designated as wilderness?" No, opponents say, because designated wilderness land hurts the local economy. Supporters claim that it does not. Here is a value issue: "Does wilderness designation of federal land hurt the local economy?" "Wilderness attracts tourists who strengthen the local economy," say the supporters. Opponents say, "Tourism adds less to the economy than do mining, grazing, and lumbering." This clash of claims results in an issue of fact: "Does tourism add more to the economy than mining, grazing, and lumbering?"

Not all claims result in issues, but any claim (policy, fact, or value) may become an issue. If you say to a friend, "We should go to the basketball game tonight," you have a claim. But, if she says, "Sure, let's go," you have no issue. Issues are important because they identify the significant points where controversy exists and, therefore, where possible claim modification can be made to reach agreement. If such modification is impossible, these points become the places where you must concentrate your argument.

In some logic systems this point is made by substituting for yes or no, yes or not yes. All you have decided to do was not to say yes to the question this particular issue poses, not to reject anything else on this subject.

Proposition

A proposition is a claim that expresses the judgment that decision makers are asked to accept or reject. Generally speaking, like other claims, a proposition may be of fact, value, or policy. But, while other claims may serve as subclaims to one another and to propositions, a proposition cannot be a subclaim because it represents the point where you want the decision makers to be when your argumentation is finished.

Claims accumulate to form other claims. These claims support a proposition. You may change your proposition when new information is added or when your proposition is rejected. Argumentation is a continuing process of changing issues, claims, and propositions. But, at the point you choose to build a case (see Chapter 5), you select a judgment for decision makers to accept or reject. The claim that states that judgment is the proposition.

The following is a brief outline of a controversy to illustrate the relationship between a proposition and its supporting claims.

Proposition of Policy: The Associated Students of this university should provide low-cost day care for the children of students.

I. Almost 20 percent of the students have children. (factual claim)
II. Acceptable day care is expensive. (value claim)
III. Many students have to restrict their educations because they do not have affordable day care available. (value claim)
IV. The Associated Students should spend money on things that students need rather than unnecessary social events and expensive popular lectures. (policy claim)
V. A day care program would cost less than 5 percent of the annual Associated Students' budget. (claim of future fact)

Support

Whatever communication (including both words and objects) is necessary and available to secure adherence, what it takes to get others to accept and act on your claim,

2 Among students of argumentation there have been attempts to define a wider variety of propositions than the three most traditional ones we have identified here. However, these show that fact, value, and policy come in a variety of forms. As long as you recognize that all fact, value, or policy claims will not look exactly alike you can be a successful arguer using these three.

There are definitional propositions (Elginer and Brockriede 218-29) in which people argue how to define a term (e.g., "What is a democracy?"). We treat these as factual claims. Definition is discussed in Chapter 6. Some people treat some value claims that imply a policy claim ("War is immoral") as a "quasi-policy claim." Some differentiate "comparative value claims" from value claims ("Rape victims are more important than a free press") and treat some value claims ("Television is an important literary genre") as what they call "value-objec claims" (Zarefsky). "Historical/scientific claims" (Zarefsky) and "historical inference claims" (Church and Wilbanks) are sometimes used to identify a particular kind of claim of fact ("The Battle of the Little Big Horn was a military victory, not a massacre").
falls within the concept of support. Sometimes, nothing more than your statement of the claim is required:

JERI: This university should not torture animals in the name of research.

MARY LOU: You’re right!

We often put support alongside a claim without waiting to find out if others will demand it.

JERI: This university should not torture animals in the name of research, because [support] wanton cruelty to living creatures is never acceptable.

It is also common to give reasons where the claim is understood but not spoken. In their conversation, Jeri might just say, "Animals have rights against unnecessary suffering," and Mary Lou will understand from the context that it is a claim about university research. In more complex situations, where disagreement is expressed or anticipated, support of more explicit kinds is used. We will discuss the following:

Evidence We can strengthen a claim and increase its potential for adherence if we add to it examples, statistics, or testimony, the three broad categories of evidence. This is discussed in Chapter 7.

Values Claims are supported when they are identified with social values—generalized conceptions of what are desirable ends or ways of behaving—of the decision makers. Values are discussed in Chapter 8.

Credibility Claims are more acceptable when the person making the claim, or the source reporting the claim, is regarded as credible, as believable, and worthy of adherence. Credibility is discussed in Chapter 9.

Argument An argument, in our usage, is a single unit of argumentation comprising a claim and its support. Both claim and support may be explicitly stated or one or both may be implied but understood by the persons participating in the argumentation process. To qualify as an argument, the support must potentially provide justification to relevant decision makers to grant adherence to the claim.

A caution is necessary here. In English usage, argument can also refer to the open expression of conflict, as in, "My roommate and I had a terrible argument last night." In fact, in Western thought arguments and argumentation are often associated with competition, a form of fighting. For example, the word "trial," used to identify a proceeding involving legal arguments, started out meaning a combat or physical torture in which the winner or survivor would be seen as having the correct side in the conflict.

The idea of argumentation functioning in a competitive forum where the desire to win might overcome the search for the best answer has always been troubling. It was this concern that led Socrates to defend the dialectical approach to decisions and the need to wait for the discovery of truth. While the inherent uncertainty pervading the domain of argumentation makes Socrates’ position unworkable, as we explain below, the competitive (some say masculine) character of many decision making situations continues to be a source of concern. We discuss other rationales in argumentation that are intended to diminish the competitive impulse in Chapter 3.

Our discussion will take such concerns into account by observing that people can use arguments in a cooperative search for the best decisions even when the search involves competition. Wayne Brockriede acknowledged this perspective when he spoke of arguers as lovers.

An angry exchange may well involve arguments, but the term argument as we use it is the antithesis of angry exchanges. For good arguments to emerge, people usually must wait until the anger is diminished. Labor–management negotiations are often delayed by what are called "cooling-off periods," in the hope of improving the quality of arguments exchanged. In this book, argument includes the argument a lawyer prepares for a trial, the argument supporting a scientific principle, or the argument of a friend that you should join her in studying for the test.

Daniel O'Keefe explains two meanings of argument other than the confusion with angry exchanges. What he calls argument1 "is a kind of utterance or a sort of communicative act" (121). This speaks of an argument as a product as we have just defined it. What O'Keefe calls argument2 is a communicative process, what we have defined as argumentation. Argumentation (argument2) refers to the ongoing process of advancing, rejecting, modifying, and accepting claims, while argument (argument1) refers to a single claim with its support. Our interest is in arguments functioning within argumentation in whatever context, ranging from informal interpersonal communication to such complex situations as law, politics, religion, business, or science.

Criticism Argumentation involves criticism of claims with the open potential for modifying them. Dogmatic defense of positions is not argumentation, it is fanaticism. Criticism involves refutation, which is discussed in Chapters 10 and 11. Stephen Toulmin says that the test of an argument is its ability to "stand up to criticism" (9).

The recording industry, confronted with what it perceived to be an alarming increase in file-swapping (obtaining digital recordings of music online without paying either the artist or the production company), decided to fight back. The arguments were typical of a commercial enterprise that finds its product being obtained without payment: they offer a product in the expectation of making a profit; if customers can get their product without paying them, they will soon be out of business; therefore, they must stop this "stealing" of their assets by calling on the law. Napster, a company that allowed music to be obtained free over the Internet, was mostly outlawed by the
courts. Then, the music industry announced a program of individual lawsuits against hundreds of file-swappers.

The arguments seemed to embody the commonsense thinking of free enterprise, and should have resulted in less file-swapping and more profits for the industry, but that did not happen. On the contrary, according to Jenny Eliscu in the August 7, 2003, issue of *Rolling Stone* magazine (15–16), the music industry experienced a severe drop in sales, 600 record stores were closed, and 1,300 label staffers were laid off. Instead of taking a traditional line of argument, Eliscu reported, the music industry should have realized they were facing an entirely new situation calling for a new way of thinking. Her example was Apple’s iTunes, a program that sells downloads for ninety-nine cents apiece. At the time of her report, more than five million songs had been sold even within the restricted market of people using Apple computers. Thus, the criticism of the music industry arguments came in two forms: a pragmatic test showing negative results, and the presence of what might be a better alternative.

This example of argumentation comes from the world of business, where criticism is frequently centered on results such as earnings, market share, and product viability. In more formal spheres such as law and science, complex rules often determine the character of criticism. Argumentation in interpersonal spheres is based heavily on cooperation and the compromising of personal preferences.

As we use it, criticism does not mean excessive fault-finding or hurtful negative comments. Our sense of criticism is the antithesis of that behavior, just as argument, as we intend it in this context, is the opposite of angry exchanges.

### Elements of Critical Decision Making

A critical decision is one that survives the test of a relevant set of criteria. Choice is made on the basis of clearly articulated arguments that have been held open to refutation or disagreement. It stands up to criticism, and it remains open to further criticism as long as possible. When the arguments change, when new arguments occur, when the criteria for decision change, the decision changes accordingly.

President Bush’s case for war against Iraq actually was based on three lines of argument, according to Ben McGrath of the *New Yorker* (July 28, 2003, 27–31): “The nature and history of the Iraqi regime; the security of the United States; and the idea that a liberated Iraq would have a transformative effect on the region” (28). When, months after Iraq had been mostly subdued, there was still no evidence of weapons of mass destruction that would have threatened U.S. security, the debate had to adjust accordingly. The Bush administration declared that the other two lines of reasoning fully justified going to war, but others insisted on arguing the point, claiming the war had been a mistake. And, a further discussion arose over the possibility that the claims about Iraq’s threat to U.S. security had been exaggerated intentionally in order to win public adherence to the war decision.

Critical decisions are the opposite of those we make unconsciously, impulsively, dogmatically. Responses to the failure to find dangerous weapons in Iraq tended to come instantly and were mostly divided along partisan lines. Republicans were inclined to dismiss the absence of weapons of mass destruction saying, “We got rid of that monster Saddam Hussein, and that’s good.” Democrats were inclined to claim, “The country was misled into believing Iraq might have nuclear weapons, and if getting rid of Saddam Hussein was the basis for war, there are a lot of other tyrants in the world who should be thrown out and we cannot go to war over all of them, so why did we pick on Saddam?” All of these claims carried the smell of dogmatism: those in favor of the war defended it regardless of changing justifications, and those opposed to war took every opportunity to condemn it. Possibly, there was uncritical decision staking going on.

However, critical decision making does not demand certain knowledge or unanimous agreement. Within the domain of argumentation, questions have no sure answers to which all reasonable people must agree. When we say decisions must stand up to criticism, we mean that before action is taken, people must engage in a critical process and act, when the time comes, on the results of that process. While there is no single way this must be done, we will explain the process by focusing on some of the more important elements: toleration of uncertainty, internal dialogue, dialectic, rhetoric, and the willingness to act even though no certain answers or unanimous agreement have been produced.

### Tolerating Uncertainty

To call decision making critical is to say that the claims of argumentation are inherently open to ongoing criticism. Decisions must be made and actions taken on them without knowing for certain that they are correct. In religion, politics, science, ethics, business, law, government, education, and many more pivotal areas of your life, you must decide and act without being able to wait until you are certain.

In ancient Greece, Socrates was sure that an absolute truth was out there waiting to be discovered, but he also recognized how very difficult it was to find. His solution was simply to continue searching, indefinitely if necessary, until absolute truth was found. Philosophers may have the luxury of an endless search for truth, but you rarely do.

Those human tasks that must be accomplished through reason within a context of uncertainty lie within the domain of argumentation. To engage in argumentation is to tolerate uncertainty.

#### Uncertainty Is Pervasive

As you proceed in the study of argumentation, you will probably be surprised to find uncertainty so pervasive. Throughout modern times, many scholars (followers of Socrates) have refused to teach argumentation because it operated in arenas of uncertainty, and they were interested only in the absolute. As those issues once thought to be susceptible to certain answers have proven to be, at best, uncertain, the study of argumentation has become increasingly important. Physicist F. David Peat characterizes the history of science in the twentieth century as moving from certainty to uncertainty. “We have left the dreamt of absolute certainty behind. In its place each of us must now take responsibility for the uncertain future” (213).

Uncertainty is partly the result of the constantly changing world we inhabit. The universe is expanding, the world continues to experience forces that push continents...
apart and mountains up and down, and living organisms are born, live, and die in con-
tinuous change. Michael Shnayerson and Mark J. Plotkin report that in 1969 the U.S.
surgeon general declared, "We can close the books on infectious diseases," because
of the emergence of antibiotics. But thirty years later a new surgeon general an-
nounced, "We are seeing a global resurgence of infectious diseases," because of the
development of drug-resistant bacteria (11).

Critical decisions once respected can, under ongoing criticism, fall into disre-
pect. Until 2002, says Clifford J. Rosen, "physicians routinely urged their female pa-
tients to take hormone replacement therapy ... at menopause, not only to protect
against osteoporosis but to ward off other age-related health problems ... including
heart disease and dementia." Then, in 2003, a report from the Women's Health Initia-
tive claimed that hormone therapy caused small increases in breast cancer, heart at-
tack, stroke, and blood clots, "and that the risks of the therapy outweighed its modest
benefits ... " (75). Medicine cannot wait until some treatment is proved absolutely
correct before using it to try to save lives. Ask your physician to identify a medicine
or medical procedure that is absolutely safe and effective.

As in all other argumentation situations, medical researchers develop the best
arguments possible, subject them to the best criticism possible, and then go ahead even
though they are not absolutely certain the selected treatment is the right thing to do.

Language Is Inherently Ambiguous Another source of uncertainty is the inher-
ently ambiguous character of language. By language, we usually mean words, but the
same principles apply to all signs, pictures, objects, mathematical symbols, musical
sounds, and anything else that facilitates communication.

One of the things that allowed people in the past to think they could find cer-
tainty was the belief that language could convey precise meaning. They thought mean-
ing was derived from a tight link between language and "reality," (the presumed but
uncertain) was false. "It was this philosopher who made the self-evident the mark
of language. Consider these apparently simple words, "A well reg-

Language is one's perception, not reality.

The idea of certain language practices always being fallacious does not square
with contemporary thought. Language is a human product generated through social
interaction and the assignment of meanings. You make interpretations of language that
are based on your understanding, and you make guesses about how others will inter-
pret your language.

In your family, neighborhood, religious institutions, and among close friends
and coworkers, you can make quite good guesses as to the meaning your words will
be given because all are using a similar interpretation strategy. However, the inherent
ambiguity of language, its unique meaning for each person, means that your guesses
will never be perfect (Kent 31).

Take, for example, the concept of equal opportunity. In the debate over affir-
mative action, everybody supports equal opportunity. But for some, equal opportunity
means creating an even playing field by giving added weight to those whose oppor-
tunities have been degraded by past discrimination. To others, equal opportunity
means letting each individual be judged by the same criteria without discrimination
in any direction. There is no single, correct meaning for equal opportunity.

We do not have to use highly abstract words such as equal opportunity to illus-
strate the ambiguity of language. Consider these apparently simple words, "A well reg-
ulated militia being necessary to the security of a free State, the right of the people
to keep and bear arms shall not be infringed." When this statement, the Second Amend-
ment to the Constitution of the United States, is said within a constitutional law con-
text its interpretation is quite different from that used by the National Rifle Association
(NRA) or a citizens' volunteer militia. The Supreme Court has put emphasis oil the
word militia and concludes that it applies to such state government sponsored organi-
izations as the National Guard in opposition to a federal standing army (U.S. v
Miller). The NRA and some constitutional historians look mostly at the words the
right of the people to keep and bear arms. and conclude it means government cannot
deny individuals' possession of firearms (Levy, 134). Whether the word arms includes
clearly military weapons such as assault rifles is also disputed.

The Attraction of Certainty Is Powerful History documents a search for truth and
certainty. Philosopher John Dewey observed that our society is obsessed with a quest
for certainty (Dewey). Whether it is a genetic characteristic of humans or something
learned, people deprecate doubt. It is an uncomfortable state of mind from which
people seek to free themselves (Peirce 7-18). We like to think of science and mathe-
ematics as bedrock, certain reality. "We demand truths that are absolute, leaders who
are blameless and doctors who are omniscient" (Salzer B5). We expect arguments
that are true and valid for everyone.

Perelman and Olbrechts-Tyteca note that Rene Descartes, the influential
seventeenth-century philosopher and mathematician, declared that anything that
was not certain was false. "It was this philosopher who made the self-evident the mark

paint what I see, but the real subject is the artist's perception, not the thing itself"
(Chapman 22). A work of art is a part of language just as words are. The subject of
language is one's perception, not reality.

Because of our society's quest for certainty, people are often satisfied with a
certified answer. "I will trust a doctor who is precise in his diagnoses, who does not
indulge in fallacies or other data bases; (3) the interpretations made by the people with whom you
are communicating (Anderson and Meyer 48). The artist Richard Schmid says, 'I

The attraction of certainty seems stronger than ever today. Many of the most important debates are predicated on the presumption of self-evident and absolute rights. There is a religious fervor behind many claims, and those who disagree are secure to hold to (Kagan et al. 467-78).

Europeans who had suffered long and terrible wars and were desperate for something certain was divine because God would not mislead. Descartes believed his clear and distinct ideas, extended, by means of apodictic [incontestable] proofs, to the derived theorems" (I). His ideas struck a chord with Europeans who had suffered long and terrible wars and were desperate for something secure to hold to (Kagan et al. 467-78).

Arguementation is a social process (audience-centered), it involves engaging individuals in making up their minds about how to act through communication with other people. Many people speak of critical thinking alone, as if it were an end in itself. But critical thinking that is uncoupled from behavior has little value. Argumentation theory asserts that critical thinking is one important part of the larger process of making critical decisions. There may be times when you are satisfied simply to think critically, but we are talking about the incessant obligation to make a decision and act on it.

The tension between critical thinking and the urgency of decision making is highlighted by a proposal by George H. Atkinson to put scientists into the Department of State so that foreign policy decisions can be based on scientific findings. He mentions issues such as HIV-AIDS, global warming, and dirty bombs. However, he acknowledges that scientists and diplomats are fundamentally different. Scientists are among the best practitioners of critical thinking, but they are not widely known for their expertise in making tough policy decisions. Scientists, says Atkinson, "would need to recognize that State Department decisions are propelled by the political process, not necessarily scientific data...When ideology comes up against scientific understanding, it can be very frustrating" (Lehrman 26).

The term critical thinking calls attention to the fact that who you are, how your mind works, and what roles you play in society are inextricably linked. Self-awareness or reflection upon your own thinking and open-mindedness toward others becomes essential features of critical thinking (Millman 48-49). Such phrases as "sensitive to context," "reflective," "thinking appropriate to a particular mode or domain of thinking," and "to assess the force of reasons in the context in which reasons play a role" are other ways to characterize critical thinking.

Many scholars argue that critical thinking means to follow the rules of formal logic, or at least to avoid fallacies that often turn on logical errors. Courses in logic are taught with the purpose of improving critical thinking. However, even those who have studied formal logic find it difficult to follow it in their thought processes. "Over the last 40 years there has been a great deal of work in cognitive psychology on people's logical reasoning abilities.... The conclusion of this work was that in many areas people seem unable to reason logically" (Oaksford and Chater 2173-4). This should not be surprising since logic is the "calculus of certainty" and it was not designed to manage our thinking in the uncertain domain of argumentation. What is needed, say Mike Oaksford and Nick Chater, is a calculus of uncertainty that they identify as probability...
Critical thinking is the personal phase of critical decision making. It is the first step in the conscious reconciliation between your inner thoughts and your social experience. As we explain in Chapter 2, critical decision making requires us to work with our individual thinking as well as our interaction with others in developing and testing arguments. To rely totally on either your own thoughts or social influence is dangerous. If individuals engaging in argumentation are not willing and able to think critically, they will be unable to participate effectively in critical decision making.

When we say that critical thinking is the personal phase of critical decision making, we are not suggesting that it is all that different from the social act of argumentation. Indeed, research suggests that critical thinking is really a mini-debate you carry on with yourself. What is often mistaken for private thought is more likely an internalized conversation (Mead 173), an internal dialogue (Mukarovsky), or an imagined interaction (Gotcher and Honeycutt 1-3). All of these concepts refer essentially to the same thing, which we will call an internal dialogue.

The idea is this: you are able to carry on a conversation in your mind that involves both a "sell" that represents you and "others" who stand for those people, real or imagined, with whom you wish to try out an argument. In a sense, all of our communication behaviors are pretested in social simulations (internal dialogue) prior to being shared in actual social situations (Wenburg and Wilmot 21). It may be misleading, in fact, to distinguish between imagined and actual interactions. During any conversation, you may find yourself doing some of the dialogue mentally while some of it may be spoken aloud, and, at any moment, you may not be able to say with confidence which is which. Some societies make no such distinction (Regal 61-66).

In critical thinking, you become keenly aware of your internal dialogues. You identify and put aside the tendency to think only of how to justify your thoughts while denigrating the thinking of others. Instead, you must apply critical tests, reflect on what you are doing, and try to open your mind to the potential weaknesses in your position while truly looking for other and better ways of thinking. Ian Mitroff calls it "smart thinking" and says if you are adept at it you "know how to cut through complex issues, ask the right questions, and solve the right problems." He concludes, "The ability to spot the right problems, frame them correctly, and implement appropriate solutions to them is the true competitive edge that will separate the successful individuals, organizations, and societies from the also-rans" (Mitroff 6).

It is critical thinking that makes you able to become a working partner in the next element of critical decision making: dialectic.

Dialectic—The External Dialogue

Dialectic is an ancient process that is very much on the minds of contemporary scholars. As an element of critical decision making, dialectic is the social dialogue in which people seek to come to understanding by opening themselves to the thinking of others with an interest in learning and changing. Critical thinking is the internal dialogue and dialectic is an external, interpersonal or intertextual dialogue (Montgomery and Baxter). Now, instead of an imagined conversation, you actually interact with one or more other people. The objective is to continue the development of your own thoughts by learning those of others, combining personal and social influences in a creative error correction process.

Aristotle defined dialectic as the counterpart of rhetoric—a companion in the critical decision making process, a philosophical disputation. He believed that people are inherently rational: "The function of man is an activity of the soul which follows or implies a rational principle" (Nicomachean Ethics 1098a).

In dialectic, individuals engage in conversation, one person advances a claim tentatively, seeks to point out the logic behind it, and then responds to the probing questions of the others. "Dialectic proceeds by question and answer, not, as rhetoric does, by continuous exposition" (Kennedy in Aristotle. On Rhetoric 26). Michael Leff identifies four points of contrast between dialectic and rhetoric: (1) issues in dialectic are more general and abstract than those in rhetoric; (2) dialectic deals with the relationship of propositions to one another in a search for rationality, while rhetoric relates propositions to situations following social norms; (3) dialectic proceeds through question and answer with participants seeking to persuade one another, where in rhetoric there is relatively uninterrupted discourse in an effort to persuade an audience; and (4) "dialectic employs undressed, technical language, whereas rhetoric accommodates and embellishes language for persuasive purposes" (57).

William Isaacs describes dialectic as dialogue enabling a "free flow of meaning, which has the potential of transforming the power relationships among the people concerned" (395). His program, he says, can help business organizations change their patterns of behavior in productive ways. In many meetings, says Isaacs, people feel themselves or their actions being challenged and this generates a tendency toward defensiveness. However, in dialogue, Isaacs argues, one has the choice to "defendor suspend: to suspend one's defensiveness in order to listen and learn from others (365).

Barbara M. Montgomery and Leslie A. Baxter discuss dialectic in relation to personal relationships. They identify four core concepts typical to dialectical scholarship: contradiction, change, praxis, and totality (3-12). While there are specific disagreements over the details of these elements, we can supply elementary explanations. Contradiction suggests the interdependent interrelationship of opposites in our interactions. "In general, phenomena are opposites if they are actively incompatible and mutually negate one another definitionally, logically, or functionally" (Montgomery and Baxter 4). It is during the dialectical stage of critical decision making that issues (statements identifying significant clashes or opposition in points of view) are identified. Change calls attention to the motion and process influences on our interactions over time. Praxis refers to what people say to each other, most commonly the stories we share. Narrative is fundamental to human interaction and it is through stories that we become who we are at any moment. Totality reminds us that contradictions cannot be discussed apart from other contradictions and that contradiction cannot be separated from time, space, and cultural environments.
Some contemporary scholars suggest that failure to understand and engage in dialectic is at the heart of some of our most painful difficulties. They suggest that the dogmatic rights-based diatribes that too often replace argumentation demonstrate the absence of dialectic in our society. We need to be aware, says Floyd W. Matson and Ashley Montagu, that the end of human communication is not to *command* but to *commune*; and that knowledge of the highest order (whether of oneself, or of the other) is to be sought and found not through detachment but through connection, not by objectivity but by intersubjectivity, not in a state of estranged aloofness but in something resembling an act of love (6).

Hamblin suggests that the difficulty in identifying fallacies in argumentation reflects an unhealthy drive for certainty. "What is, above all, necessary," says Hamblin, "is to de-throne deduction from its supposed pre-eminent position as a provider of certainty" (250). He would replace it with dialectic through which people can determine the specific demands of the question and thereby identify what are truly misuses of logic.

Richard H. Gaskins says that argumentation runs into trouble when debates boil down to an inability to prove any position beyond question, resulting in decisions being made not on solid, critical grounds, but by default (1-11). He proposes more effective use of dialectic through which values, presumptions, and criteria can be worked out in advance (240-72).

Derek Edwards and Jonathan Potter argue that psychological research into such human cognitive behavior as perception, memory, language and mental representation, knowledge, and reasoning must proceed from the fact that these processes are socially and culturally embedded (14). They are to be understood through an examination not of the individual mind (which is all but impossible to examine) but in naturally occurring conversation, an informal dialectic. "The phenomena of thought and reasoning, of mind and memory, are best understood as culturally formed, socially shaped and defined, constituted in talk and text..." Cognitive processes, they say, "...are ideas generated within cultures, conceptions of sense, action and motive that people invent to mediate their dealings with each other and to engage in social forms of life" (18).

Rhetoric

The fourth element in critical decision making, building on uncertainty and the internal and external dialogues, is rhetoric. Aristotle defined rhetoric as the "ability [of a person, group, society, or culture] in each [particular] case to see [perceive] the available means of persuasion" (On Rhetoric 36). To perceive the available means of persuasion is to understand an issue from all points of view and ways of thinking. It is not necessary to use all of the available means, just take them into account (13).

While the meaning of rhetoric has varied dramatically in the almost 2,500 years since Aristotle, we will discuss its contemporary relevance to argumentation and critical decision making. There are three key rhetorical elements we need to explain here: audience, probability, and proof.

Audience

Rhetoric is concerned with people, how they think, act, and communicate. When we say our perspective of argumentation is audience-centered, we are saying it is a rhetorical perspective. In dialectic, the focus is on the soundness of reasoning and availability of support for claims. In rhetoric, the focus is on the bases with which people will grant or deny adherence to claims. As we will see in the discussion of proof, people resort to a wide variety of bases in making up their minds.

In his discussion of rhetoric, Aristotle observed rhetoric occurring throughout society: deciding on public policy, resolving legal disputes, and developing and supporting the values that underlie most arguments. He noticed that different people respond differently to arguments, so he talked about how rhetoric can be adapted to the young, the middle-aged, and the elderly; to the wealthy and the powerful; to those in all stations of society.

Aristotle divided knowledge into two groups: scientific demonstration, which he believed was not audience-centered and rhetoric, which dealt with those issues not susceptible to certain demonstration and thus turning on human judgment. Today, scholars are much less likely to accept this division. Scientists of all kinds are more inclined to see their work as audience-centered, and we now read of rhetorical analyses of almost all aspects of scientific endeavor. Thomas Kuhn speaks of scientific revolutions in discussing his contention that science rests on paradigms or groups of people with common models, perspectives, problems, and procedures. When paradigms come into conflict, they work it out, says Kuhn, by using what is essentially political rhetoric.

Probability

As we have said, argumentation deals with those tasks that require decision under uncertainty. In a condition of uncertainty, the best we can seek is probability. We need to talk about two different meanings for the word probability.

In statistics and other forms of mathematical analyses of frequencies or chance, objective calculations can be made of the probability with which a certain phenomenon will occur or the probability that the phenomenon that did occur was the result of pure chance. For example, serious gamblers can say with high confidence the frequency with which certain combinations of numbers will appear on dice or roulette. Weather forecasters can calculate the frequency with which certain weather patterns will occur. Experimenters can say that their results could have been explained by chance alone, say, once in a thousand times.

Rhetorical probability is a more general concept that embraces mathematical probability as well as what might be called human or subjective probability. Early research into decision-making revealed that people do not necessarily stick to mathematical probability even when it is explained to them and guaranteed to produce greater profits (Edwards and Tversky 71-89). Psychologists coined the term "subjective probability" to describe the experience in which, for example, people were told to bet on a single outcome because it was certain to produce a victory where all other options would not. In spite of this information, people varied their bets because they felt like doing so. Feelings, intuitions, values, and emotions are part of rhetorical probability.

Economists Andrew W. Lo and Richard H. Thaler note that people are presumed to behave rationally when making such decisions as investing money. For example,
before buying securities, you should "nixiintize utility" by seeking to receive the most satisfaction for your money, and rationally that means paying the "right price" based on the intrinsic value of the stock you are buying. Price-earnings ratios, charts of past performance, and the behavior of factors that influence stock performance can be studied to produce mathematical probabilities of future values. But, say Lo and Thaler, people regularly reject such rational probabilities to act instead on, "behavioral assumptions: inch as overreaction, overconfidence, loss aversion, and other human foibles that each of us exhibits with alarming regularity (Lo and Thaler 10-13). "They conclude (list markets are not rational in the traditional economic sense. Investors ultimately act on the basis of rhetorical (subjective) probability.

Rhetorical probability works two ways: the extent to which one person is willing to advance a claim and be held responsible for it, and the extent to which people are willing to accept and act upon a claim. In critical decision making, both of these probability judgments apply.

We have said that argumentation deals with the uncertain, but there is no law that says you cannot say you are certain about a claim. People do it all the time. We use such words as "absolutely," "certainly," "unquestionably," or "without a doubt" to describe our claims. If your claim really cannot be advanced with objective certainty, how can you say it is so? Because you are not describing the mathematical probability of your claim or some other measure of reality, you are describing the extent to which you are willing to be associated with the claim and be held responsible for the outcome. You may say that mathematically the safest bet on the typical game of craps is the "come" or "pass," but the outcome is still uncertain, it is a gamble, and your certainty will likely disappear if you are asked to guarantee a high bet. The mathematical probability has not changed, just your stake in the outcome.

Consider, for example, the decision to drop atomic bombs on two Japanese cities during World War II. There were scientific probabilities about whether the bombs would work and whether they would cause extensive destruction. There were tactical probabilities about whether the Japanese would surrender once the bombs were dropped, or if they were about to surrender anyhow. The alternative, dropping the bombs on a deserted area while Japanese leaders looked on, was rejected as unlikely (improbable) to cause surrender. There was the military probability of how many lives would be lost on both sides if an invasion of the Japanese home islands occurred. There was the moral probability whether history would judge the dropping of the bombs to be justified.

The debate over this decision continues. There is sharp disagreement on most of these questions. President Harry S. Truman, however, could not wait a half-century to make the decision. He had little time and knew he would live forever with the consequences of the decision. He committed himself to those consequences, and that is rhetorical probability.

On the fifty-eighth anniversary of the dropping of the bombs, Nicholas D. Kristof reported in the New York Times that "there's an emerging consensus: we AmericaI have blood on our MilIs" (August 5, 2003). But he argued in reply that the consensus is "profoundly mistaken" and that the bombs helped end the war.

Proof Mathematical calculations and experimental demonstrations constitute proof for some scientific probability claims. Rhetorical proof, which includes such scientific proof, is more complex.

Aristotle included three forms of proof in his discussion of rhetoric. *Logos* represented the use of reasoning taking the form of logic as support for claims. In Aristotle's system, examples served as the rhetorical equivalent to induction, and the *enthymeme* (a rhetorical syllogism) served as rhetorical deduction. In a symbolic format, induction and deduction are forms of logic that work on problems outside the domain of argumentation. A pure induction requires itemization of 100 percent of the elements under consideration. A rhetorical induction or example requires sufficient instances to satisfy the audience. Simply demonstrating that it satisfies the rules of internal validity proves a symbolic deduction or syllogism. A rhetorical deduction or enthymeme depends upon its link to established beliefs, values, and ways of thinking already held by the audience.

Ethis: for Aristotle, included the feelings, emotions, intuitions, sympathies, and prejudices that people bring to decisions. It suggested the fact that people accept or reject claims and make or refuse to make decisions on the basis of the values that are connected to the arguments.

Ethis: identified the extent to which people are inclined to go along with an argument because of who expresses it. In contemporary research, ethos is seen as part of credibility.

In the chapters that follow, we will discuss the various forms of support that are available to prove your claims. The important point to remember here is that rhetorical proof is addressed to people (audience-centered) and the quality of proof is measured by the extent to which the appropriate decision makers find it sufficient for their needs.

Acting within Uncertainty

The final element in critical decision making is the willingness and ability to act even when you are uncertain. Philosophers are adept at thorough criticism and dialectic. They are able to express themselves with rhetorical effectiveness. But often they lack the position of Socrates and refuse to act until they have achieved certainty. The result is that they are not usually identified as action-oriented people.

*In many college curricula, critical thinking is taught alone, without being subsumed under critical decision making. That approach to critical thinking is similar to the philosophers mentioned above. You may have well-developed critical skills, but unless you have learned how to act on them, they are of little value in a practical sense.*

We come then, in this final element of critical decision making, back to where we began—the tolerance of uncertainty. 11 is not sufficient to tolerate uncertainty if you allow yourself to lie frozen by doubt and end up like Ilandet. Critical decision making includes ultimately the willingness to make and act upon your decision, knowing that you may later regret it, or knowing, like President Truman, that history night condemn you more than a half-century later.
We have introduced you to the domain of argumentation by identifying the elements of argumentation and critical decision making. In argumentation, a key term is adherence, which characterizes the audience-centered focus of argumentation on the appropriate decision makers, who have also been defined. Claims, the points or propositions you offer for others' consideration and adherence, the support or materials provided to help others understand and subscribe to your claims, and the definition of argument as the intersection of a claim and its support have been discussed. Arguments serve to resolve issues of fact, value, and policy. Criticism, the give and take of making your claims and noting the weaknesses in alternative claims, has been explained as a key feature of argumentation.

To participate in critical decision making, you must understand that you will necessarily be working with uncertain knowledge, and you must keep your mind open to alternatives and resist the temptation to rush to belief. Critical thinking is a concept that describes reflective, open-minded attention to your own thinking and the search for alternatives and complete information. Dialectic and rhetoric are counterparts to the development of critical decisions. Dialectic is the question-answer process through which you and others inquire, seek to understand the values and criteria appropriate to your decision, and entertain various points of view. Rhetoric, on the other hand, is the process of persuasion through which claims are presented to decision makers (audience) with the appropriate proof to help them understand and grant adherence.

Finally, we have said that to be a part of critical decision making you must be willing to tolerate uncertainty but to take action in its presence. In summary, we have said that argumentation provides the mechanism that mediates the tension between individual judgment (your mind) and social judgment (your culture) to bring the most powerful and relevant criteria to bear on any decision. The product is social (audience-centered) critical decision making.

KOJEC'TI'

Read the editorials in one issue of a newspaper and answer these questions for each:

a. What adherence is sought from the reader?

b. Who are the appropriate decision makers? Why?

c. What claims does the editorial make?

d. What support is provided for the claims?

e. What criticism can you make of the arguments?

KEY TERMS

criteria

critical decision

count/mesh

reasonableness

belief systems

world views

starting points

interpretation strategies

facts

probabilities

commonplaces

spheres

ultimate purpose

patte

interaction

W hen you interview for a job, you and the interviewer are engaged in the critical appraisal of argumentation. The position announcement should set the broad criteria that will be used to judge your application, and the interview will flesh them out. A help-wanted ad that appeared in the Salt Lake Tribune for positions with KeyBank noted that, "Integrity is adhering to the highest standards of honesty, professionalism and ethical behavior in all that we do and is one of Key's core values." They go on to describe the client relations representative position:

You will provide customer transaction services, process teller transactions, and balance daily work. Requires 1 year of work experience (preferably in consumer service), good written/verbal communication abilities, basic math skills, ability to develop working knowledge of financial products/services, familiarity with computer/office equipment, and a high school diploma or equivalent.

During your interview with KeyBank, they could well ask, "Why should we hire you?" This is an invitation for you to present arguments on your behalf, complementing those in your application. What will be the strongest arguments you can