Chapter 2

Clear Thinking, Critical Thinking, and Clear Writing

Kraft Foods, Inc., makers of Oscar Meyer franks, Velveeta, and other gourmet items, recently faced a dilemma with their new candy line. The candies were selling well, but a few consumers, including the New Jersey Society for the Prevention of Cruelty to Animals, were not pleased with Trolli Road Kill Gummi Candy, which had been made to look like flattened chickens and squirrels with tire treads across the carcasses. Kraft promptly discontinued the line, because “we take comments from our consumers really seriously and in hindsight we understand that this product could be misunderstood.”*

Anyone can understand Kraft’s reason for discontinuing the candies. Frequently, however, we are confronted with arguments that are more difficult. Not long ago, Fort Irwin Elementary, a California public school, extended its kindergarten hours in order to provide, according to a newsletter from the principal, “a thinking meaning appropriately centered-based academic/social program to meet the diverse needs of the kindergarten students.” Was this a good reason for extending the kindergarten hours? It is difficult to say even what the reason is, it is so confusing.

*Associated Press report, March 4, 2005
Still, the claim this argument tried to support is clear enough. The kindergarten hours should be extended. Unfortunately, however, often even the claim is unclear. For example, Allan Bloom, the famous American educator who authored *The Closing of the American Mind*, which was read (or at least purchased) by millions, wrote in that book:

> If openness means to “go with the flow,” it is necessarily an accommodation to the present. That present is so closed to doubt about so many things impeding the progress of its principles that unqualified openness to it would mean forgetting the despised alternative to it, knowledge of which makes us aware of what is doubtful in it.

Is this true? Well—that’s really hard to say. The problem is, you don’t know exactly what Professor Bloom is asserting in this passage.

Lack of clarity in a statement derives from various causes. President George W. Bush once reportedly said, “We’ll be a great country where the fabrics are made up of groups and loving centers.”* This sentence demonstrates what can happen if you string words together in random order. One of our former students wrote in an essay that “Legal laws are fine, but illegal ones should be changed.” This is what philosophers call confusing categories; you can ask whether your teacher is old, but you can’t ask whether being old is old. Or take this remark from a newspaper call-in column:

> I am glad to be an American, and I appreciate our system of government. Also, I am for a very strong defense. However, the people protesting the war on all sides are out there because they care about life. Now we are in an awful mess. Why? We need to put ourselves in the other guy’s shoes. Going out and killing the other guy may be the way to preserve your own.

Here, the problem is not that words were assembled randomly, but that sentences were.

So any number of problems may make a statement unclear. Not infrequently, people just don’t say what they mean. On the television program 60 Minutes II, George W. Bush said “We want anybody who can find work to be able to find work.”* This is something like wanting anyone taller than 6 feet to be over 6 feet tall. What’s unclear is why anyone would want something that couldn’t happen. The President misspoke. He probably intended to say there should be jobs available for people who want them, and it just came out funny. We once read in a letter to the editor the statement, “When I was in the Marine Corps, I was plainly told that many good men died in the uniform that was issued to me.” Here, too, the writer probably just wanted to say something simple, probably that good men die serving as Marines, but he lost control of his sentence.

Although obscurity can issue from various causes, three sources of confusion stand out as paramount: excessive vagueness, ambiguity, and terms...
that need defining. In this chapter, we shall consider vagueness and ambiguity in detail, and then talk in detail about definitions.

Also, from time to time situations arise in which we need to think critically in writing, in the form of what is called an argumentative essay. In this
type of writing enterprise, one takes a position on an issue and supports it with argument. A good argumentative essay consists of four parts: a statement of the issue, a statement of one's position on that issue, arguments that support one's position, and rebuttals of arguments that support contrary positions. Obviously, an argumentative essay is weakened by statements that are obscure, and what we say in this chapter has direct application to writing clear argumentative essays. We shall return to this subject after we discuss vagueness, ambiguity, and definitions.

VAGUENESS

The single most common form of unclear thinking or writing is excessive vagueness. The concept of vagueness is pretty easy to grasp. A vague statement is one whose meaning is indistinct, imprecise, or lacks details. Vagueness is what elevates your blood pressure when you are trying to find someone's house and it is late and the directions you have been given include something like “Go down the road a ways to the turn and you’ll be there.” Vagueness is what annoys students when the teacher says the term paper
“should be long enough to get the job done.” When candidates for public office say they want to reduce crime, are for fairness in taxation, and favor a healthy environment, it sounds grand, but you generally have no real idea what they have in mind because they are speaking vaguely. If your boyfriend or girlfriend is vague when you ask if he or she loves you, you may well press for clarification.

The first thing to notice about vagueness is that it is not all or nothing. Vagueness comes in degrees. “My house payments are higher than they used to be” is vaguer than “My house payments went up 30 percent beginning last month.” “The New Jersey SPCA sent a written request to Kraft asking that Trolli Road Kill candy not be sold” is less vague than “Animals rights activities griped about a new line of candy.” “Norman is nice” is vaguer than “Norman has good manners,” and the last assertion is vaguer than “Norman always holds the door open for you.”

Generally speaking, what is to be avoided is not vagueness per se, but an undesirable degree of vagueness. Even though a claim may be less precise than it could be, that doesn’t mean it should be more precise. If you tell your friend you expect higher house payments, your friend doesn’t necessarily expect you to be more precise. But if your mortgage lender tells you to expect higher house payments, you want details because the lender’s degree of vagueness is unacceptable. Recently, we were behind a van that said: “PRISONER TRANSPORT. STAND BACK.” The second sentence is vague, but we got the idea.*

Sometimes you want to be vague. If your friend asks you for your opinion of her mother, you might temper an unfavorable reply with a certain amount of vagueness. When Oscar Goodman, the mayor of Las Vegas, was asked by a class of elementary school students what he would want most if he were stranded on an island, he said, “a bottle of gin.”** Some parents complained; and we think perhaps he should have been more vague.

Although you may sometimes want to be vague, there is a point at which a claim is so vague it is impossible to determine if it is true or false. Obviously, before one can even begin to consider whether or not such a claim is true, one must attempt to clarify it. For example, we recently heard people on National Public Radio discussing whether “three servings of dairy a day will help you lose weight.” Is this claim true? Well, that’s not the right question to ask at this point. The appropriate questions are, what is meant by a serving, what is included as “dairy,” and what counts as helping you lose weight. What is called for is what logicians call precising definitions, definitions that spell out in more detail what is meant by a vague concept. We shall say more about precising definitions in a moment; for now, the point is the obvious one that vague statements may require preliminary sharpening before one can consider whether they are true or false. If someone says, “Women can tolerate more stress than men,” the best place to begin would not be by saying, “Prove it,” or “How interesting,” or “I agree,” but by attempting to clarify what was meant by “tolerate,” by “stress,” and by “more.” Of course, some claims may be so vague that it would be best just to move on to another topic. “This country is morally bankrupt” might fall in this category.

*Come to think of it, perhaps the last two words were not even necessary.
The vagueness of some claims is due to the use of relative words, such as “old,” “bald,” and “wealthy,” that have borderline cases. Bill Gates, for instance, clearly is wealthy and clearly is not bald. But is a person who makes over $150,000 a year wealthy? Is Bruce Willis bald? It’s hard to say in borderline cases. But if a candidate for governor says, “We should raise taxes on the wealthy,” time is well spent trying to pin down what he or she has in mind by “wealthy.” Thus, claims with relative terms are not always too vague; it just depends on the situation.

Further, the absence of relative words does not automatically immunize a claim from undesirable vagueness. “Maria is bringing her sibling to class on Friday” is probably precise enough, depending on the kind of class we are talking about. But “Maria plans to bring her sibling to the slumber party Friday night” may not be precise enough if your own daughter is going to the slumber party and Maria’s siblings include brothers. Neither statement about Maria contains vague relative terms, but the context of the second one may make it unduly vague.

As should be clear by now, it makes little sense to insist that a claim be totally free of vagueness. If we had to be absolutely precise whenever we made a statement, we would say and write little. That being said, it is prob-
ably true that most people err more on the side of being too vague rather than
the opposite.

**VAGUE AND MISLEADING COMPARISONS**

Comparisons deserve to be singled out for special mention in a discussion of clarity, since they so often are vague or lack important details. Here are a number of comparisons often seen in advertisements:

- Cut by up to half
- Now 25 percent larger
- Quietest by far
- New and improved
- Now better than ever
- More than 20 percent richer

Such claims cry out for clarification. What does “up to half” include? Twenty-five percent larger than what? How far is “by far”? New and improved over what? Better in what way? How much more than 20 percent? And you can ask other questions, too. Remember, though, that the amount of vagueness you can tolerate in a comparative claim depends on your interest and purposes. For example, knowing that attic insulation will reduce your utility bill “by 15 to 45 percent” may be all it takes for you to know that you should insulate.

Some comparisons may be too vague even to be meaningful. Consider the statements “Have more fun in Arizona,” “Gets clothes whiter than white,” “Delivers more honest flavor.” These phrases simply mean have fun in Arizona, gets clothes white, and can be tasted. There are no meaningful comparisons among them. On the other hand, “Nothing else is a Pepsi” isn’t too vague; taken literally, it’s necessarily true. Nothing else is a turkey, either. What the claim means, of course, is that no other soft drink tastes as good as Pepsi.

Questions to keep in mind when you are considering comparisons include the following:

1. **Is important information missing?** It is nice to hear that the unemployment rate has gone down, but not if you learn the reason is that a larger percent of the workforce has given up looking for work. Or, suppose someone says that 90 percent of heroin addicts once smoked marijuana. Without other information, the comparison is meaningless, since 90 percent of heroin addicts no doubt listened to the Beatles, too. Our local U.S. Congressional representative Wally Herger recently warned his constituents that Social Security is in dire straits. At one time, he said, there were 42 workers to support a single retiree and now there are only three. This does indeed sound ominous, except Representative Herger didn’t mention that the 42 to 1 ratio was at the startup of Social Security before many had retired; he also failed to mention that the 3 to 1 ratio has been around for the past 25 years, during which period Social Security accumulated a surplus.*

*Statistics from our colleague, Professor (of American History) Carl Peterson.
2. Is the same standard of comparison being used? Are the same reporting and recording practices being used? A change in the jobless rate doesn’t mean much if the government changes the way it calculates joblessness, as sometimes happen. In 1993, the number of people in the United States with AIDS suddenly increased dramatically. Had a new form of the AIDS virus appeared? No, the federal government had expanded the definition of
A Misleading Mathematical Visual

Sometimes a straightforward mathematical comparison can become misleading by the way it’s presented. The bar graph below, from a CNN/USA Today/Gallup Poll, compares Democrats, Republicans, and Independents with respect to their agreement with a court’s judgment that the feeding tube should be removed from Terri Schiavo. From a casual look at the bar graph, it might seem that Democrats are much more in favor of removing the tube than Republicans or Independents.

But look at the numbers rather than the bars themselves, and we get a different story. The first graph only shows us the parts of the bars, from 53 percent to 63 percent. If we display the entire bars, from 0 to 100 percent, the graph looks like this:

In this case, the Democrats look (correctly) to be only somewhat more in favor of removing the tube. The lesson here is to avoid drawing conclusions unless you’ve had a close look at the data, including the manner in which it is displayed.

Comparison originally made by truthout.org.
AIDS to include several new indicator conditions. As a result, overnight, 50,000 people were considered to have AIDS who had not been so considered the day before.

3. **Are the items comparable?** It is hard to compare baseball sluggers Barry Bonds with Willie Mays if one but not the other used steroids, or if one had the benefit of improved equipment. It’s hard to derive a conclusion from the fact that this April’s retail business activity is way down as compared with last April’s, if Easter fell in March this year and the weather was especially cold. That more male than female drivers are involved in traffic fatalities doesn’t mean much by itself, since male drivers collectively drive more miles than do female drivers. Comparing share values of two mutual funds over the last ten years won’t be useful to an investor if the comparison doesn’t take into account a difference in fees.

4. **Is the comparison expressed as an average?** The average rainfall in Seattle is about the same as that in Kansas City. But you’ll spend more time in the rain in Seattle because it rains there twice as often as in Kansas City. If Central Valley Components, Inc. (CVC), reports that average salaries of a majority of its employees have more than doubled over the past ten years, it sounds good, but CVC still may not be a great place to work. Perhaps the increases were due to converting the majority of employees, who worked half-time, to full-time and firing the rest. Comparisons that involve averages omit details that can be important, simply because they involve averages.

Averages are measures of central tendency, and there are different kinds of measures or averages. Consider, for instance, the average cost of a new house in your area, which may be $150,000. If that is the mean, it is the total of the sales prices divided by the number of houses sold, and it may be quite different from the median, which is an average that is the halfway figure (half the houses cost more and half cost less). The mode, the most common sales price, may be different yet. If there are likely to be large or dramatic variations in whatever it is that is being measured, one must be cautious of figures that represent an unspecific “average.”

### AMBIGUOUS CLAIMS

A sentence that is subject to more than one interpretation is said to be ambiguous rather than vague. “The average price of a house in Monterey is $995,000” is ambiguous, because the word “average,” as we just mentioned, has more than one meaning. If you are informed that Paul cashed a check, you won’t be able to tell from that information whether Paul took in cash or gave it out; and if you hear that Jessica rents her house, you don’t know if she rents it to someone or from someone. If Jennifer rises from her desk on Friday afternoon and says, “My work here is finished,” she might mean she has finished the account she was working on, or that her whole week’s work is done and she’s leaving for the weekend, or that she is fed up with her job and is leaving the company. You can have a lot of fun finding online collections of “ambiguous headlines” with such examples as “Farmer Bill Dies in Senate.”

But ambiguities can be quite subtle. People hooted when Bill Clinton maintained that the word “is” is ambiguous, but in fact sentences which use
that word are subject to more than one interpretation. If you say, “Howard is fighting with Susan” you might mean that Howard is fighting with Susan at this very moment. But then again, you might not mean they are fighting at this very moment, but that their relationship currently is acrimonious. Bill Clinton was impeached for providing false information to a grand jury, but whether or not some of the information was false indeed “depends,” just as Clinton said it did, “on what the meaning of ‘is’ is.” Ambiguity is not necessarily obvious, and it may not be a triviality.

A problem related to ambiguity crops up when various parties to a dispute mean something different by a key claim. For example, there are those who think the “War on Terror” is a real war and there are those who do not; the two sides evidently do not have the same thing in mind by “war.” Does abortion involve killing a human being? Well, some use the word in such a way that a pregnant woman is two human beings; others use it in such a way that a pregnant woman is one human being. We recently heard a debate between a supporter and an opponent of gay rights. The supporter seemed to have a different meaning for the term “rights” than his opponent had, or at least different from what the opponent said the supporter meant by the term. The supporter said he wanted gays to have the right to be treated equally under the law; the opponent said the supporter wanted additional or special rights not accorded to others. Much wasted breath and misunderstanding can result if the two sides in questions like these fail to sort out definitions of key terms.

Now, it certainly is true that often one is clear in one’s own mind which of two meanings is meant. If you say “Horatio plays the trumpet by ear,” you probably know whether you mean that Horatio doesn’t use music or that
Horatio uses his ear the way other trumpet players use their embouchure. But, unfortunately, sometimes people are confused about which of two meanings they have in mind, and they vacillate between meanings. For example, you sometimes hear beginning students in philosophy maintaining that every voluntary action is a selfish action, done to benefit oneself. This is a striking idea, and the student typically is quite impressed by the finding. Unfortunately, the argument given for this idea invariably utilizes a different concept of “selfish action,” according to which, if you are doing something because you desire to do it, you are acting selfishly. And the confused argument goes something like this: All voluntary acts are done to satisfy one’s own desire to do them; thus, all voluntary acts are selfish acts; thus, all voluntary acts are done for self benefit. The argument is confused, because it switches to a new concept of selfishness midstream.

Semantic Ambiguity

We want to tell you now about three different types of ambiguity. First, if a claim is ambiguous because it contains an ambiguous word or phrase, it is said to be a semantic ambiguity. Consider the following examples:

1. The average price of a house in Monterey is $995,000.
2. Calhoun always lines up on the right side.
3. Jessica is cold.
4. I know a little Italian.
5. Terry disputed their claim.
6. Aunt Amy does not use glasses.

Semantic ambiguity can be eliminated by substituting an unambiguous word or phrase, such as “eyeglasses” for “glasses” in the last item, or adding a clarifying phrase, such as “of the room” to the end of the second item.
Recently, one of us obtained information from the American Automobile Association prior to driving to British Columbia. “To travel to Canada,” the brochure stated, “you will need a birth certificate or a driver’s license and other photo ID.”

This is ambiguous. One way of looking at it means you have to take a photo ID other than a birth certificate or a driver’s license, and another...
way doesn’t mean that. Using parentheses will make these alternatives clear, we hope:

[1] (You will need a birth certificate or a driver’s license) and (other photo ID)
[2] (You will need a birth certificate) or (a driver’s license and other photo ID)

This is an example of what is known as syntactic ambiguity, a statement that is ambiguous because of its grammar or the way it has been structured or put together. Here are a few other examples:

Players with beginners’ skills only may use court 1.

Susan saw the farmer with binoculars.

People who protest often get arrested.

He chased the girl in his car.

There’s somebody in the bed next to me.

As you can see, the cause of the ambiguity here isn’t that they contain an ambiguous word. The problem is syntax. For example, in the first sentence the problem is that we don’t know what “only” applies to. Does the sentence mean, players with beginners’ skills may use only court 1? Or does it mean players with only beginners’ skills may use court 1? Or does it mean only players with beginners’ skills may use court 1?

The way to eliminate syntactic ambiguity is to alter punctuation or rewrite the claims. For example, you might rewrite 5 as “There’s somebody next to me in the bed,” to make it clear that “next to me” refers to a person and not to a bed.

Often syntactic ambiguity results when we do not show clearly what a pronoun references. “The boys chased the girls, and they giggled a lot” is ambiguous because we don’t know whether “they” refers to the boys or the girls. A similar example is: “After he removed the trash from the pool, the children played in it.”

Modifying phrases can create syntactic ambiguities if one is careless with them: “He brushed his teeth on the carpet,” will serve as an example, as will “She wiped up the water with her younger brother.” “He was bitten while walking by a dog” is yet another.

Grouping Ambiguity

The third kind of ambiguity, which is really a type of semantic ambiguity, is called grouping ambiguity. Here is an example of grouping ambiguity:

Secretaries make more money than physicians.

Is this claim true or false? That’s the wrong question to ask, because you don’t know what the claim is. Secretaries as a group make more money than physicians make as a group, but secretaries individually don’t make more money than physicians individually. The problem, as you can see, is that “secretaries” and “physicians” are ambiguous: Are you referring to secretaries and physicians individually or collectively?

“Lawnmowers create more air pollution than dirt bikes” is a similarly ambiguous statement. We imagine lawnmowers collectively create more air
pollution than dirt bikes because there are so many more lawnmowers, but on an individual basis, we aren’t sure. Certainly they do not individually make as much noise as dirt bikes, which are among the loudest and most annoying noisemakers around.

As with the other types of ambiguities, grouping ambiguity can interfere with clear thinking. The last time a president and the Congress raised taxes, it was called the biggest tax increase in history by those who didn’t like it. That particular tax increase, which happened under Bill Clinton, was indeed the biggest tax increase in terms of collective tax revenues, but it was not the biggest tax increase in the percentage of an individual’s income that he or she paid to taxes. In other words, the phrase “the biggest tax increase in history” suffers from grouping ambiguity: The individual tax increases were not the biggest, the collective tax increase was.

The Fallacies of Composition and Division

In June 2005, the San Antonio Spurs won the National Basketball Association (NBA) championship, demonstrating they were the best team in the NBA. Does it follow that the players on the Spurs were the best players in the NBA? If you think it does, you have made a mistake: What’s true of an entire team is not necessarily true of the players on the team.

People sometimes make this type of mistake. They think that what is true of a group of things taken collectively or as a group is automatically true of the same things taken individually. As the above example shows, this is a confusion, and this type of confusion is so common logicians have a name for it: the fallacy of division. (A fallacy is a mistake in reasoning.)

After the 2002 election, in which the Republicans won a majority of the seats in the U.S. Senate, George W. Bush stated that “the people voted for a Republican Senate.” In one sense, this statement is true: Voters collectively did elect a Republican Senate. But in another sense, the statement is false: Voters individually did not elect a Republican Senate. Indeed, no person anywhere voted for a Republican Senate, because the question, “Do you want a Republican Senate?” was not on any ballot. If you were to conclude that because people collectively preferred a Republican Senate, individually they did so as well, that would be the fallacy of division.

Further examples of this fallacy include:

- Congress is incompetent. Therefore, Congressman Cox is incompetent.
- The Eastman School of Music has an outstanding international reputation. Therefore, Vladimir Peronepky, who is on the faculty of Eastman, has an outstanding international reputation.

Running this reasoning in reverse is also a fallacy. What holds for a group of things individually doesn’t automatically hold for the things collectively or as a group. Just because the best basketball players in the NBA are on the same team, you can’t conclude that team is the best in the NBA. If you think what holds true of a group of things individually must also hold true of the same things collectively or of the group as a whole, that’s the fallacy of composition. Here are other examples:

We will briefly discuss the history of American Indians on this campus.
— From a flyer advertising “Conversations on Diversity” at the authors’ university

Somewhere on this globe, every ten seconds, there is a woman giving birth to a child. She must be found and stopped.
— SAM LEVENSON (1911–1980)
Roger Federer and Svetlana Kuznetsova are the two best tennis players in the world. Therefore, they'd make the best mixed doubles team.

No member of faculty at the University of Cincinnati makes a lot of money; therefore, faculty salaries don’t cost the University of Cincinnati a lot.

**Recognizing and Deciphering Ambiguity**

Some claims, such as “I will put the sauce on myself,” might perhaps reasonably be diagnosed as either semantic or syntactic ambiguities. We advise not spending forever arguing over to which category this or that claim belongs. More important is to recognize ambiguities when you encounter them and to avoid them in your own thinking.

Some ambiguous claims don’t fall into the categories we have mentioned. “The fastest woman on the squad” is ambiguous if two or more women on the squad are equally fast and faster than anyone else. “I cannot recommend him highly enough” might mean he is even better than my highest recommendation, or it might mean I cannot recommend him highly enough for you to consider him. The ambiguity is not clearly semantic or syntactic.

Often, the context of a claim will show which possible meaning a speaker or writer intends. If a mechanic says, “Your trouble is in a cylinder,” it might be unclear at first whether a wheel cylinder or an engine cylinder is at fault, but the correct meaning will probably become clear in due course from the rest of what gets said. Also, common sense often dictates which of two possible meanings a person has in mind. For example, “He brushed his teeth on the carpet” would most likely not refer to an unusual technique of dental hygiene.
That being said, ambiguous sentences are a fact of life, and how we understand them can have serious implications. For example, the Second Amendment to the Constitution states, “A well-regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.” This sentence suffers from more than one type of ambiguity, and among them is a grouping ambiguity. Historically, courts have tended to interpret the right to bear arms as a collective right of citizens. Under this interpretation, citizens are bearing arms if they serve in, say, a National Guard unit that has cannons and such. Recently, however, former Attorney General John Ashcroft supported an interpretation of the Second Amendment that would give citizens taken individually the right to bear arms. Under the Ashcroft interpretation, each individual has the right to bear his or her own weapons. Other provisions of the U.S. Constitution are equally ambiguous or vague, but terribly important nonetheless.

DEFINING TERMS

Back when the authors were young, there were no such things as Handi-Wipes, apart from the jeans we had on. When Handi-Wipes came out, it was pretty self-explanatory what they were, but at some point someone probably explained to us what exactly a Handi-Wipe is. That is, they defined the term “Handi-Wipe.”

Handi-Wipes don’t have much to do with critical thinking, but definitions do. Any serious attempt to think critically about a claim requires having a clear idea of what the claim actually is. If there are unfamiliar or unusual words in it, you need to know what they mean. Or, if there are familiar words used in an unfamiliar way, you need to know what they mean. For example, take “mouse.” When the authors were young, this was what Mickey was. Now “mouse” has a whole different meaning to most people.

There are other reasons for defining terms related to critical thinking. Most important of these is to reduce vagueness or eliminate ambiguity. After all, if you have an ambiguous claim, you don’t know what the claim is. And if
you have a claim that is excessively vague, you may need to tighten it up be-
fore you get to work evaluating it. If someone is discussing the right to “bear
arms,” for example, you might want to define “bear” and define “arms.” Does
“bearing arms” include taking a surface-to-air missile to the movies?

The Purpose of Definitions

To summarize these two main purposes of definitions:

- Others may use terms we don’t understand, and we may use terms they
don’t understand. One may even use terms one doesn’t fully understand
oneself. In all three cases, the meaning of the term needs to be spelled out.
Definitions used for this purpose often are called stipulating definitions.
A stipulating definition is called for if an unusual or unfamiliar word is
used, or if a brand new word is coined, or if a familiar word is being used
in a new way.

- Sometimes you need to reduce vagueness or eliminate ambiguity; you
need to make things more precise. Definitions used for this purpose are
called precising definitions.

Types of Definitions

At this point, we must make a distinction between the purpose a definition
serves and the type of definition it is. A purpose and a type are different things.
The purpose of food, for example, is to satisfy nutritional and caloric needs
and to please the palate; the types of food include meat, vegetables, Pringles,
and so forth.

Whatever purpose is served by defining a term, most definitions are of
one or another of the following three types:

1. Definition by example: pointing to, naming, or describing one or more
examples of something to which the defined term applies. “By ‘scripture,’
I mean books like the Bible or the Koran.” “By ‘temperate climate,’ I mean
weather in an area like the mid-Atlantic states.” “A mouse is this thing here,
see?”

2. Definition by synonym: giving another word or phrase that means the
same thing. “‘Fastidious’ means the same as ‘fussy.’” “‘Prating’ is the same as
‘chattering.’” “‘Pulsatile’ means the same as ‘throbbing’”; “To be ‘lubricous’
is to be ‘slippery.’”

3. Analytical definition: specifying (a) the type of thing the term applies
to and (b) the difference between the things the term applies to and other
things of the same type. “A mongoose is a ferret-sized mammal native to India
that eats snakes and is related to civets.” “A samovar is an urn with a spigot,
used especially in Russia to boil water for tea.” “A mouse is a piece of com-
puter equipment used to place the position of a cursor.”

Those being the classic three definition types, it must be said that what
counts in the real world of critical thinking is clarifying a term by whatever
method works, including combinations. A real-world definition of “mouse”
in an office would probably run something like this: “Well, grandma, a mouse
is part of the hardware of a computer. You see that thing there on the desk? And you see that little flashing thing on the screen? You want to be able to move that little flashing thing—like this, see? That's what the mouse does.”

In real life, we sometimes need to critically evaluate claims that include big league abstractions like friendship, loyalty, fair play, war, rights, freedom, and so forth. If you had to define “loyalty” or “fair play,” you might never get the boat out of the dock. Such concepts have subtle and complex parameters that might take a lifetime to pin down. For practical purposes, what is usually needed for words like these is not a complete definition but a precising definition that focuses on one aspect of the concept and provides sufficient guidance for the purposes at hand. “To me, ‘justice’ does not include giving a person extra opportunities just because he is a white male.”

**Rhetorical Definitions**

If a liberal friend “defines” a conservative as “a hide-bound, narrow-minded hypocrite who thinks the point to life is to make money and rip off poor people,” you have been given an analytic definition. But, you know the definition wasn’t offered to clarify the meaning of “conservative.” It was just a way of trashing conservatives. Definitions like this, whose purpose is to express or influence attitudes rather than to clarify, are called **rhetorical definitions**. We shall be examining this type of definition in a later chapter, but it is worth mentioning the category here, to see how they work.

Many terms convey a meaning other than their literal meaning. This “meaning” is a term’s “connotation” or **emotive meaning** or **rhetorical force** (these being the same)—that is, its tendency to elicit certain feelings or attitudes. “Dog” has the same literal meaning as “pooch,” “mutt,” and “cur,” but these words vary in the attitudes they convey. “Elderly lady” and “old bag” have the same literal meaning, but differ considerably in rhetorical force. When people use a “definition” to express their own attitude about something or to manipulate someone else’s attitude, they invariably utilize the rhetorical force of the words in the definition. This means that if a definition utilizes words with strong positive or negative associations, we can be pretty sure it is a rhetorical definition, not a definition intended to clarify meaning. The words “hide-bound,” “narrow,” “hypocrite,” and “rip off” all are rhetorically charged words; their occurrence in the definition above is what makes it rhetorical. Where thinking critically about a claim requires defining key terms, those terms should be defined as much as possible using neutral terminology.

**WRITING ARGUMENTATIVE ESSAYS**

Recently the Educational Testing Service revamped the infamous Scholastic Aptitude Test (SAT), which many universities use when determining whether to admit an applicant. The most significant change was to have test takers write an argumentative essay. This change in the SAT shows how important educators think the ability to write this type of essay. That’s because writing an argumentative essay is doing nothing other than thinking critically—and leaving a paper trail for others to follow. This isn’t a book on writing, but writing an argumentative essay is so closely related to thinking critically we would like to take the opportunity to offer our recommendations. We know
professors who have retired because they could not bear reading another student essay. As a result, we offer our two-bits worth here, in hopes of continuing to see familiar faces.

As we said earlier, an argumentative essay generally has four components:

1. A statement of the issue
2. A statement of one's position on that issue
3. Arguments that support one's position
4. Rebuttals of arguments that support contrary positions

Obviously, the key terms in an argumentative essay should be free from ambiguity, vagueness, and other sources of confusion, and that in turn may require definitions. However, there is another source of obscurity in an essay, and that is faulty organization. Every now and then, we encounter pieces of writing in which words, statements, and arguments are so strangely assembled that the result is unintelligible. If you come across an argumentative essay that suffers from such serious organizational defects that it cannot be fully understood, then your only option is to suspend judgment on the unintelligible aspects. If, however, your own writing suffers from these defects, then you might benefit from a few principles of good organization.

Principles of Organization and Focus

In an argumentative essay, the most natural and common organizational pattern is to follow the four points listed above in that order: State what you are trying to establish and then proceed to establish it by setting out the considerations that support your position—adding explanations, illustrations, or other elaboration as needed—followed by a rebuttal of the arguments that run counter to your position. You don't have to adhere to this order, but if you are one who has trouble organizing your writing or don't know how to present your ideas, you can do much worse than by just following the four steps listed above in that order. Beyond that, here are four more recommendations on how to write an argumentative essay:

1. **Focus.** Make clear at the outset what issue you intend to address and what your position on the issue will be. That said, nothing is quite so boring as starting off with the words, “In this essay, I shall argue that X, Y, and Z,” and then going on to itemize everything you are about to say, and at the end concluding with the words, “In this essay, I argued that X, Y, and Z.” As a matter of style, you should let the reader know what to expect without using trite phrases and without going on at length. However, you should try to find an engaging way to state your position. For example, instead of “In this essay, I shall discuss whether alcoholic beverages can hurt animals,” you could say: “Give your cat wine? You’d better think twice about that one. . .”

2. **Stick to the issue:** All points you make in an essay should be connected to the issue under discussion and should always either [a] support, illustrate, explain, clarify, elaborate on, or emphasize your position on the issue, or [b] serve as responses to anticipated objections. Rid the essay of irrelevancies and dangling thoughts.
3. *Arrange the components of the essay in a logical sequence.* This is just common sense. Make a point before you clarify it, for example, not the other way around. Place support item B next to item B, not next to item F or G. For example, this makes sense:

We should go ahead with the picnic; after all, we went to a lot of trouble. Plus, it isn’t going to rain.

This, however, does not:

We should go ahead with the picnic. Plus, it isn’t going to rain; after all, we went to a lot of trouble.

When supporting your points, bring in examples, clarification, and the like in such a way that a reader knows what in the world you are doing. A reader should be able to discern the relationship between any given sentence and your ultimate objective, and they should be able to move from sentence to sentence and from paragraph to paragraph without getting lost or confused. If a reader cannot outline your essay with ease, you have not properly sequenced your material. Your essay might be fine as a piece of French philosophy, but it would not pass as an argumentative essay.

4. *Be complete.* Accomplish what you set out to accomplish, support your position adequately, and anticipate and respond to possible objections. Keep in mind that many issues are too large to be treated exhaustively in a single essay. The key to being complete is to define the issue sharply enough that you can be complete. Thus, the more limited your topic, the easier it is to be complete in covering it.

Also, be sure there is closure at every level. Sentences should be complete, paragraphs should be unified as wholes (and usually each should stick to a single point), and the essay should reach a conclusion. Incidentally, reaching a conclusion and summarizing are not the same thing. Short essays do not require summaries.

**Good Writing Practices**

Understanding the four principles mentioned above is one thing, but actually employing them may be more difficult. Fortunately, there are five practices that a writer can follow to improve the organization of an essay and to help avoid other problems. We offer the following merely as a set of recommendations within the broader scope of thinking critically in writing.

1. At some stage after the first draft, outline what you have written. Then, make certain the outline is logical and that every sentence in the essay fits into the outline as it should. Some writers create an informal outline before they begin, but many do not. Our advice: Just identify the issue and your position on it, and start writing by stating them both.

2. Revise your work. Revising is the secret to good writing. Even major league writers revise what they write, and they revise continuously. Unless you are more gifted than the very best professional writers, then revise, revise, revise. Don’t think in terms of two or three drafts. Think in terms of *innumerable* drafts.

3. Have someone else read your essay and offer criticisms of it. Revise as required.

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We ourselves are also for that too.

I’m for abolishing and doing away with redundancy.

— J. CURTIS McKee, of the Wisconsin State Elections Board (reported by Ross and Petras)

Autobiography Skewers
Kansas’ Sen. Bob Dole

— Headline in the Boulder (Colo.) Sunday Camera (reported by Larry Engleman)
4. If you have trouble with grammar or punctuation, reading your essay out loud may help you detect problems your eyes have missed.

5. After you are completely satisfied with the essay, put it aside. Then, come back to it later for still further revisions.

**Essay Types to Avoid**

Seasoned instructors know the first batch of essays they get from a class will include samples of each of the following types. We recommend avoiding these mistakes:

- **The Windy Preamble.** Writers of this type of essay avoid getting to the issue and instead go on at length with introductory remarks, often about how important the issue is, how it has troubled thinkers for centuries, how opinions on the issue are many and various, and so on, and so on. Anything you write that smacks of “When in the course of human events . . .” should go into the trash can immediately.

- **The Stream-of-Consciousness Ramble.** This type essay results when writers make no attempt to organize their thoughts and simply spew them out in the order they come to mind.

- **The Knee-Jerk Reaction.** In this type essay, writers record their first reaction to an issue without considering the issue in any depth or detail. It always shows.

- **The Glancing Blow.** In this type of essay, writers address an issue obliquely. If they are supposed to evaluate the health benefits of bicycl-
ing, they will bury the topic in an essay on the history of cycling; if they are supposed to address the history of cycling, they will talk about the benefits of riding bicycles throughout history.

**Let the Reader Do the Work.** Writers of this type essay expect the reader to follow them through non sequiturs, abrupt shifts in direction, and irrelevant sidetracks.

### Persuasive Writing

The primary aim of argumentation and an argumentative essay is to support a position on an issue. Good writers, however, write for an audience and hope their audience will find what they write persuasive. If you are writing for an audience of people who think critically, it is helpful to adhere to these principles:

1. Confine your discussion of an opponent’s point of view to issues rather than personal considerations.
2. When rebutting an opposing viewpoint, avoid being strident or insulting. Don’t call opposing arguments absurd or ridiculous.
3. If an opponent’s argument is good, concede that it is good.
4. If space or time is limited, be sure to concentrate on the most important considerations. Don’t become obsessive about refuting every last criticism of your position.
5. Present your strongest arguments first.

There is nothing wrong with trying to make a persuasive case for your position. However, in this book, we place more emphasis on making and recognizing good arguments than simply on devising effective techniques of persuasion. Some people can be persuaded by poor arguments and doubtful claims, and an argumentative essay can be effective as a piece of propaganda even when it is a rational and critical failure. One of the most difficult things you are called upon to do as a critical thinker is to construct and evaluate claims and arguments independently of their power to win a following. The remainder of this book—after a section on writing and diversity—is devoted to this task.

### Writing in a Diverse Society

In closing, it seems appropriate to mention how important it is to avoid writing in a manner that reinforces questionable assumptions and attitudes about people’s gender, ethnic background, religion, sexual orientation, physical ability or disability, or other characteristics. This isn’t just a matter of ethics; it is a matter of clarity and good sense. Careless word choices relative to such characteristics not only are imprecise and inaccurate but also may be viewed as biased even if they were not intended to be, and thus they may diminish the writer’s credibility. Worse, using sexist or racist language may distort the writer’s own perspective and keep him or her from viewing social issues clearly and objectively.

But language isn’t entirely *not* a matter of ethics, either. We are a society that aspires to be just, a society that strives not to withhold its benefits from individuals on the basis of their ethnic or racial background, skin color, religion, gender, or disability. As a people, we try to end practices and change or...
Complicated, but neither vague nor ambiguous

What day is the day after three days before the day after tomorrow?

remove institutions that are unjustly discriminatory. Some of these unfair practices and institutions are, unfortunately, embedded in our language.

Some common ways of speaking and writing, for example, assume that “normal” people are all white males. It is still not uncommon, for instance, to mention a person's race, gender, or ethnic background if the person is not a white male, and not to do so if the person is. Of course, it may be relevant to whatever you are writing about to state that this particular individual is a male of Irish descent, or whatever, and, if so, there is absolutely nothing wrong with saying so.
Some language practices are particularly unfair to women. Imagine a conversation among three people, you being one of them. Imagine that the other two talk only to each other. When you speak, they listen politely; but when you are finished, they continue as though you had never spoken. Even though what you say is true and relevant to the discussion, the other two proceed as though you are invisible. Because you are not being taken seriously, you are at a considerable disadvantage. You would have reason to be unhappy.

In an analogous way, women have been far less visible in language than men and have thus been at a disadvantage. Another word for the human race is not “woman,” but “man” or “mankind.” The generic human has often been referred to as “he.” How do you run a project? You man it. Who supervises the department or runs the meeting? The chairman. Who heads the crew? The foreman. Picture a research scientist to yourself. Got the picture? Is it a picture of a woman? No? That’s because the standard picture, or stereotype, of a research scientist is a picture of a man. Or, read this sentence: “Research scientists often put their work before their personal lives and neglect their husbands.” Were you surprised by the last word? Again, the stereotypical picture of a research scientist is a picture of a man.

A careful and precise writer finds little need to converse in the lazy language of stereotypes, especially those that perpetuate prejudice. As long as the idea prevails that the “normal” research scientist is a man, women who are or who wish to become research scientists will tend to be thought of as out of place. So they must carry an extra burden, the burden of showing that they are not out of place. That’s unfair. If you unthinkingly always write “The research scientist . . . he,” you are perpetuating an image that places women at a disadvantage. Some research scientists are men, and some are women. If you wish to make a claim about male research scientists, do so. But if you wish to make a claim about research scientists in general, don’t write as though they were all males.

The rule to follow in all cases is this: Keep writing free of irrelevant implied evaluation of gender, race, ethnic background, religion, or any other human attribute.

This list summarizes the topics covered in this chapter:

- If you want to think critically, think clearly.
- Claims and arguments suffer from confusion as a result of multiple causes, including, importantly, ambiguity and vagueness.
- Vagueness is a matter of degree; what matters is not being too vague for the purposes at hand.
- A statement is ambiguous when it is subject to more than one interpretation, and which interpretation is the correct one isn’t clear.
- Three main types of ambiguity are semantic ambiguity, syntax ambiguity, and grouping ambiguity.
- To reduce vagueness or eliminate ambiguity, or when new or unfamiliar words are brought into play, or familiar words are used in an unusual way, definitions come in handy.
The most common types of definitions are definition by synonym, definition by example, and analytical definition.

Some “definitions” are intended not to clarify meaning but to express or influence attitude. These are known as rhetorical definitions.

Rhetorical definitions accomplish their ends by means of the rhetorical force (emotive meaning) of terms.

Critical thinking done on paper is known as an argumentative essay, a type of writing worth mastering, perhaps by following our suggestions.