SENSE AND NONSENSE IN SOCIAL RESEARCH & SOCIAL ISSUES
Spring 2010

SOC 08 @ CSUS
&
SOC 305 @ CRC

CRITICAL THINKING COURSE PACK

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Spring 2010, Critical Thinking Course Pack
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**CRITICAL THINKING ~ ELEMENTS AND STANDARDS**

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<th>ELEMENTS OF CRITICAL THINKING/REASONING/READING</th>
<th>STANDARDS OF CRITICAL THINKING/REASONING/READING</th>
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<td>These do not need to be addressed in a linear fashion....they are dynamic to the process.</td>
<td>These should be applied to the elements in order to check the <strong>quality</strong> of the reasoning.</td>
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- **Purpose** – What is my purpose? What is the author’s purpose?
- **Questions** – What question(s) do I want to explore or raise? What question is being addressed? What are the key questions raised by the author?
- **Information** – What information/data am I using to come to a conclusion? What information do I need to settle the question? What information/data/evidence does the author present?
- **Inferences/Conclusions** – How did I reach this conclusion? Is there another way to interpret the information? What key conclusions is the author coming to? Are those conclusions justified?
- **Concepts (Key Concepts)** – What important or instrumental concepts guide my reasoning? What important or instrumental concepts guide the author’s reasoning? Are these concepts defined or explained?
- **Assumptions** – What am I taking for granted with my reasoning, conclusion, etc.? What assumptions led me to my conclusion? What is the author taking for granted? Are there underlying assumptions in the author’s conclusion? How are these demonstrated in the evidence?
- **Implications/Consequences** – If someone accepted my position on this issue, what would be the implications? What am I suggesting? What is the author suggesting one should accept if they see the reasoning in their position?
- **Points of View** – From what point of view am I looking at this issue? Is there another point of view to consider? What is the author’s point of view? Were other points of view considered by the author?

CRITICAL THINKING FRAME (SOC 08)

I. IDENTIFICATION & ASSESSMENT
   A. Identify the Primary Issue/Topic
      • What is the topic/problem/issue the author is discussing?
      • Does the topic/problem relate to any larger issues?
      • Are key terms/concepts stated clearly? Explain
   B. Identify & Assess the Conclusion
      • What is the author trying to convince you, the reader, of believing?
      • What leads you to believe this is the conclusion statement?
   C. Identify & Assess the Evidence (Reasoning)
      • What evidence does the author provide to support his/her conclusion? (provide 2 - 3 examples minimally)

II. ASSESSMENT
   A. Assess the Conclusion
      • Is the conclusion statement specific or vague? Explain and defend. Be sure to specifically identify the conclusion statement.
      • Does the conclusion address the stated problem?
   B. Assess the Evidence (Reasoning)
      • Is the evidence/reasons specific or indirect?
      • Is the evidence experimental/observational/correlation etc.?
      • Is the evidence unfairly biased or one-sided?
      • Are the examples supported by enough evidence to convince you of their existence and influence they have on the problem?
      • Does the evidence appear accurate? Do there appear to be any fallacies?
      • Is the evidence up to date?
      • Does the evidence rely on one’s values in order to support the conclusion?

III. EVALUATION OF REASONING
   A. Is there a logical and consistent line of reasoning between parts or some of the parts of the premise and the remedy or conclusion? Or is it inconsistent? (provide examples as you explain your position)
   B. How coherent and adequate is the author’s overall line of reasoning from premise to conclusion? This helps address the clarity of the reasons.
   C. What are the strengths? What are the weaknesses? What is the quality of evidence?
   D. Does the issue and reasoning lead logically to the conclusion?
   E. Does the conclusion have to be true in order for the evidence to be believed, or does the evidence have support for its “truth” which helps establish and/or lead one to the conclusion?

IV. PERSONAL REACTION/DECISION
   • To what degree do you agree or disagree with the position taken?
   • Did the author’s argument change your position or thinking in any way? Did it cause you to reconsider a view you previously held? Or Did the author reinforce your position?
   • Could the author’s presentation be improved? If so, how?
1) Citation of the Article (in APA format):

2) Briefly state the primary issue discussed in the article:

3) Identify the Conclusion/Premise. Specifically identify it with a page number and the quotation itself. Then indicate how/why you believe this to be the conclusion (information regarding the rationale you should incorporate is provided in your CT Course Pack, p. 12):

4) List at least 3 important reasons/arguments (and their evidence) the author(s) uses in an attempt to support the conclusion statement:

5) How do the Reasons (as well as facts and examples) provided relate to and/or support the conclusion? [Your discussion here should be specific. Apply the critical thinking skills discussed in the course, such as clarity, validity, quality, fallacy identification, etc. relative to reasons and evidence. Be sure to explain.]

6) What is YOUR Overall View/opinion of the article? How do the pieces fit together? How clear is the author overall? (examine the standards of reasoning handout in the CT Coursepack)...Be sure to explain.

7) What questions can you generate based on your reading of this article?
CRITICAL THINKING: THOUGHTS FOR CONSIDERATION

The term “critical thinking” has been defined by many scholars, journalists, researchers, and the like. Yet when the everyday person is faced with defining critical thinking, one thinks this is common—sense. At times a definition is given that “Critical thinking is to clearly examine the information being considered.” A key aspect of this definition is “clearly”. Therefore, the listener would want to probe the speaker>writer on what s/he means by “clearly”. Additionally, is this basic definition really enough to demonstrate to someone what is meant by “critical thinking”? Especially in light of the fact that we have many different critical thinking courses that are required as a general education requirement in State of California universities. I would encourage all students to spend a bit of time asking themselves not only what is this term/concept that is central to these courses, but also why is it so important that it has been made a requirement?

VARIOUS DEFINITIONS

Before you read definitions from the literature, take a moment to write a few sentences that embody what you think the phrase critical thinking means.

According to Cooper and Patton (2007) the term critical needs to be examined when defining critical thinking. They write that

“the term critical means censorious or faultfinding, but it comes to us from the Greek kriticos and Latin criticus, meaning able to discern or separate. It is this sense of critical that we have in mind – discerning or discriminating thought characterized by careful analysis and judgment.” (Cooper and Patton, 2007, p. 5)

Founders of the Foundation for Critical Thinking, Dr. Richard Paul and Dr. Linda Elder, define the term as “Critical thinking is a process by which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them” (Paul and Elder, 2004, p. 1). They go on to write that as a result of engaging in this process one will become a “well cultivated thinker.” Finally, they state that “Critical thinking is, in short, self-directed, self-disciplined, self-monitored, and self-corrective thinking” (Paul and Elder, 2004, p. 1). With this in mind they indicate that there are standards and elements of excellence that one can use as they engage themselves in the process of critical thinking along with the consideration of developing intellectual traits that will help us master the elements and standards.

Writer and professor Gerald Nosich shares several definitions of critical thinking from the literature. One of these is the one already mentioned from Paul and Elder, however the other two are slightly different but also contributed by leading researchers in the field. Nosich (2005) quotes Robert Ennis’s classic definition: “Critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do” (Nosich, 2005, p. 2). Next he shares a definition written by Matthew Lipman: “Critical thinking is skillful, responsible thinking that is conducive to good judgment because it is sensitive to context, relies on criteria, and is self-correcting” (Nosich, 2005, p. 2). After a short discussion of these three definitions Nosich highlights some prominent features
of critical thinking: “critical thinking is reflective”, “critical thinking involves standards”, “critical thinking is authentic”, and “critical thinking involves being reasonable” (Nosich, 2005, pp. 3-4). Then finally he states that there are three main parts to critical thinking which include:

1) Asking questions
2) Answer questions through reason
3) Believe the results of the reasoning

One last piece of information relative to definitions for students to consider is a discussion from M. Neil Browne and Stuart M. Keeley (2007) in Asking the Right Questions: A Guide to Critical Thinking. They indicate that “Thinking carefully is always an unfinished project…. Critical questions provide a stimulus and direction for critical thinking; they move us forward toward a continual, ongoing search for better opinions, decisions, or judgments” (p. 2). Subsequently, Browne and Keeley also indicate there are three dimensions that are used when engaged in critical thinking. See how they are similar or different from the ones previously stated:”

1) awareness of a set of interrelated critical questions;
2) ability to ask and answer critical questions at appropriate times; and the
3) desire to actively use the critical questions (Browne and Keeley, 2007, p. 2)

Many students will generate definitions that indicate critical thinking is being able to fully understand something while taking in different sides of an issue while not being swayed by fallacies or misinformation. Consider this with the definitions stated above and revisit what you first wrote as a definition for critical thinking. What needs to be added, modified, deleted? How can you improve upon your critical thinking skills?

As stated by Nosich (2005), Browne & Keeley (2007) and others, asking questions is a very important skill of the critical thinker. Therefore, practice and hone your skills in this arena. However, do not just ask questions for asking questions sake. Keep the following in mind as you fine-tune this very important critical thinking tool.

Posing questions can help one to avoid making assumptions by suggesting alternative ways of looking at the subject/issue and indicating needed research. Asking questions can help sharpen your observations. If you enter a crowded store, you might ask yourself some questions before assuming the business is a gold mine. How many of the shoppers are looking and how many are actually buying? What are they purchasing -- low profit sale items or full-priced merchandise? Does the store have more employees or more expensive features than its competitors? Does the store’s success depend on massive advertising or costly promotions? Is the store located in expensive location that would inflate its overhead? As one poses questions about their topic it is important to think of what might help to understand this better and from many different points of view.
CRITICAL THINKING & THE SOCIOLOGICAL PERSPECTIVE

So, this course is offered as a sociology course. What exactly do these two arenas have to do with one another? Sociologists study various aspects of human behavior; more specifically sociologists study social behavior and the interaction of people. This can be on a macro level or micro level, meaning we study large organizations (macro) such as IBM, Global Volunteers of America, CSUS; small groups (some may call this mezzo, depending on the approach it is macro or micro) such as sororities, community task forces, college class; or we may look at why do certain individuals become involved in certain groups and not others, how do they impact the group and how does the group impact them and the other groups of which they are a part of (this would be micro).

Generally speaking, “The sociologist usually studies numbers of people (groups, categories, and societies) and their patterns of behavior (norms, roles, and institutions)” (Landis, 2001, p. 454). As a discipline, despite our different theoretical orientations and methodological preferences, we have a tendency to engage in debunking. Sociologist Peter Berger suggests that as we analyze people and the world around them(us) it is often necessary to “unmask the pretensions and the propaganda with which men cloak their actions with each other.” Therefore, sociologists constantly attempt to find the explanations that are beneath the surface or inform an experience versus just accepting it as so because that is how it has been and it worked.

Two quotes from Berger, which I particularly find useful when discussing the sociological perspective, are “things are not always what they seem” and that sociologists are constantly “seeing the strange in the familiar”. These two statements are also applicable to the quest in critical thinking.

As you may have already gathered, the sociological perspective involves the generation of questions in order to better understand social behavior and in turn social issues. Judson Landis (2001) attempts to provide students “an idea of the way social scientists study the world” (p. 2) by sharing questions that might be asked. I am listing some of these below as I think they help to demonstrate how such questions are important not only to ask as sociologists but as we embark on our journey of critical thinking.

[1.] A statistics fanatic finds that in a particular year, Mexico and Miami had a lot of murder but little suicide and that Hungary, Denmark, and western states like New Mexico, Nevada, and Wyoming had many suicides. Are numbers freak wonders if this is a one-time event or typical, and if typical, why?

[2.] A poll tells us that most people (80-85 percent) favor using the death penalty as punishment for serious crimes like murder. That same poll mentions that a good portion of those that favor the death penalty do so because they believe that it deter others from committing crime. Is that really so, and is the poll accurate?

[3.] We know what crime looks like these days – burglary, robbery, auto theft, and so on. But what about 300 years ago: Were there crime waves then like now?
[4.] A sane individual goes to the admitting officer of a mental hospital and gives that person an accurate case history (which in general states that he is as sane as you and I) and also says one thing that is not true: that he occasionally hears voices, unclear voices that seem to be saying words like “empty,” “hollow,” and “thud.” What will happen to our insane person?

[5.] A teacher is led to believe (falsely) that several of his or her students are very sharp and are bound to do well this semester. How does the teacher behave toward the “sharp” students, and how do the students perform” (Landis, 2001, p. 2-3).

Sociologists and critical thinkers alike evaluate what other people say, write, and sometimes do to decide whether to believe their statements, positions, and/or alleged facts and what they may mean. Some statements are easy to assess. For example, "The President of the United States serves a four-year term." This is a fact and requires little deliberation. It can be easily verified. Other statements involve ideas that are more complex: "The United States must develop its Strategic Defense Initiative to protect it from enemy attack." Not only do you have to decide whether the United States has enemies that can destroy it, you have to determine whether building a Strategic Defense Initiative is the best way to counter such an attack. Your assessment of this statement may have a significant impact on your attitudes toward American defense and the policies of the U.S. government. Another current day position statement might be "We need stronger immigration policies so that terrorists are not able to easily cross our borders.” What do you think needs to be explored further in order for us to determine whether or not we agree with this statement?

It is very important to acknowledge our biases. As we consider facts and information presented to us we need to consider and try to minimize the impact of bias as we form our position.

**Bias** refers to a prevailing attitude, set of values, or prejudices, which influence the way people perceive new information. Bias may be irrational, based on rumor, misinformation, fear, or hatred:

* A bunch of Muslims want to buy the old Methodist Church and turn it into a mosque! We should organize the neighborhood and protest to protect our children from terrorists and fanatics!

This kind of statement reveals prejudice and ignorance. Similar statements were once made about Catholics and Jews. Other forms of bias include sexism and homophobia.

Not all bias stems from racism or hatred. A **bias may be based on experience, knowledge, and research.** A respected judge may be biased against the testimony of jailhouse snitches. Investigative reporters may be biased against official press releases. Doctors may be biased against fad diets or herb remedies. No one is free of such biases. Developing the ability to think critically can be difficult because it is easier to make hasty judgments based on opinions and biases than it is to evaluate facts and arguments. For example, your friends might think that the death penalty is just, and you might also think so just because your friends do, without hearing any arguments to the contrary. Your viewpoint, based solely on the opinions of others, would be weak.
The key point is to recognize that exceptions do exist. People should be aware of their biases and be willing to consider and investigate new ideas and not dismiss them simply because they seem unfamiliar or unconventional.

**Distinguishing Fact from Opinion and Bias from Reason:** This skill focuses on distinguishing between a statement based on fact (one that can be proved true) and a statement based on opinion (one that expresses how a person feels about something or what a person thinks is true). The ability to distinguish between these two types of statements is an essential first step to critical reading and thinking. Whether reading a newspaper or magazine, listening to a disagreement, or preparing for a debate, you can become a more sophisticated consumer of information if you can identify the speaker's viewpoint.

When first learning to assess this skill, you may be tempted to identify statements of fact as "important" and statements of opinion as "irrelevant" or "unimportant." It is important to remember that a factual statement may be false or taken out of context and thus be misleading. Likewise, on some issues, a statement of opinion might be the most important of all. The point is to practice distinguishing the difference between a fact and an opinion, not make evaluative judgments about them.

The hardest statements to label will be those that include statistics or other objective proof, yet are not merely fact. It is fairly easy to recognize that "two percent of all teenagers commit suicide" is a statement of fact. However, by adding another factor - "The high rate of divorce is responsible" - the "factual statement" becomes an opinion. You must be aware of such pitfalls.

**Distinguishing Between Primary and Secondary Sources:** A primary source is original material or information that has not been interpreted by another person. Examples of primary sources are court records, government documents (like the Constitution), letters, some documentary films, memoirs, and position papers of organizations, original research, and editorials. A secondary source is made up of information collected from numerous primary sources that is interpreted by the collector. Examples of secondary sources include histories (such as a history of the Constitution and its framers), many magazine articles, and critical analyses.

Primary sources often have the immediacy of an eyewitness. They can provide details that may not be available to an outside observer or scholar. But they may also present information in a manner colored by the author's personal views or experience. For example, a Palestinian describing his life under Israeli rule gives a valuable personal account of what conditions are like. Yet in looking at such an account, one might ask whether the author's individual experiences are typical of the average Palestinian. Is his account affected by his political views or affiliation? The reader must presume that this eyewitness account would be different from a version given by an Israeli living in the same town. Both accounts might be accurate; in which case you would have to consult other primary and secondary sources to gain an understanding of what life on the West Bank is like.

A secondary source may or may not offer information that is more analytical and comprehensive than that found in a primary source. The secondary source author has the advantage of hindsight and, in many cases, access to several primary sources and thus to several
perspectives. The author may have more of an objective distance from the events being depicted. But a secondary source is only as factually accurate as the primary sources it uses. And the secondary source author may write an account as colored by personal views as an eyewitness might. Thus a secondary account of Palestinian life on the West Bank in a newspaper that targets a Palestinian audience might reflect and reinforce the publication's editorial stance about the Arab-Israeli conflict.

Some sources are not clearly primary or secondary and must be considered carefully. For example, is a television documentary a primary or secondary source? On the one hand, it contains visual presentation of primary sources, such as interviews. On the other hand, the interviews and the presentation of the topic in general are a product of the filmmaker's interpretation of what is important in covering the topic. In this case, the source could be both primary and secondary.

**Evaluating Information Sources:** In addition to identifying whether a source is a primary or secondary source you must also learn to discern what information is most valuable for completing an assignment or report. You probably have been told that all information, no matter how objectively presented, has a point of view. When *Time* magazine promises to "put the world in your hands," it is really promising that its staff will gather and condense what they consider the top stories of the week into a concise, convenient package. Although such a product is not a bad source of information, it is not a perfectly objective, all-knowing source, either. Its content is the reflection of the biases, both political and cultural, of the magazine's editors and publisher and also of their limitations in time and resources when trying to cover world events on a weekly basis.

You should critically examine sources of information to determine the point of view and to find out how this point of view affects the accuracy of their coverage. When examining a source of information, check the author's previous writings or his/her relationship to the events being written about. Is the author a member of a partisan organization involved in a dispute being portrayed? Has the author shown a consistent stand on the topic in previous writings? In addition, you should look at other articles on the topic in the same publications. Is there a consistent point of view? Its point of view can also be discerned by comparing its information with other sources that are known to have opposing views on the same topic. Learn to question a source: What are its intentions? What are its biases? What does it gain by presenting a particular perspective?

A source should also be evaluated for its timeliness. It must give information that adequately reflects the time period of the topic being covered. For example, when writing about a topic such as the protest movement during the Vietnam War, you may consider a variety of sources in order to write on the topic. While you may want to look at histories of the protest movement first, to get an overall impression, you will also want to look at eyewitness accounts of participants in the movement, as well as opponents of it. A mixture of such accounts from both the time period of the war and those written later might also be useful. The sources written after the war may bring some historical distance to their discussion of the topic. But the sources written during the war give direct evidence of why people were opposed to it.

**Beyond determining the point of view and timeliness of an information source, you must also judge its usefulness.** You must determine whether the source deals with the aspects of the subject needed for the research project. You should know that some sources will be more
directly useful for writing about the topic, while some will provide valuable background information, while others will have only marginal value at best.

In evaluating a source, you should determine whether the author's intention is appropriate to serve your needs. A scholarly secondary source, for example, would be more useful in providing an in-depth historical perspective on a topic than seventy seconds of documentary film footage on a television news program. On the other hand, the news story may contain quotes that give useful information or insight into a topic. All of these factors should be considered when determining the usefulness of a source.
IDENTIFYING THE Conclusion

To identify the conclusion, the critical thinker must ask, “What is the writer or speaker trying to prove?” or “What is the communicator’s main point?”

When looking for the conclusion you search for a statement or set of statements that the writer or speaker wants you to believe. Conclusions are inferred; they are derived from reasoning. They are ideas that require other ideas to support them.

Clues When Identifying the Conclusion

Clue No. 1: Ask what the issue is. The conclusion is usually a response to an issue.

Clue No. 2: Look in likely locations. Conclusions tend to occupy certain locations. The first two places are at the beginning and at the end. Check the end first to get yourself out of your normal routine in looking for this information. You should be able to find the conclusion statement without reading the entire article.....as what makes it a conclusion statement is not that “it summarizes the article”. Although that may end up being true that is not a qualifier for being the conclusion statement.

Clue No. 3: Look for indicator words. The conclusion will frequently be preceded by indicator words that announce a conclusion is coming. A list of such words include:

- But
- Consequently
- Hence
- Indicates that
- In fact
- In short
- It follows that
- It is highly probably that
- It should be clear that
- Point to the conclusion that
- proves that
- shows that
- so
- suggests that
- the most obvious explanation
- the point I’m trying to make is
- therefore
- the truth of the matter is
- thus
- we may deduce that

Clue No. 4: Remember what a conclusion is not. Conclusions will not be any of the following: examples, statistics, definitions, background information, and evidence.

Clue No. 5: Ask the question, “and therefore?”

Another important aspect as you begin to read an article is to check the context of the communication and the author’s background.
REASONING

After we have identified the conclusion statement in an article our next step is to identify the reasons offered by the author. By doing this we are able to “reason things out” and assess in what way and to what degree the reasons provide support for the conclusion.

Nosich (2005) states “In a reasoned discussion...listening is as important as speaking. Participants try to understand the reasons behind other people’s beliefs, and they try to identify both the strong and weak points of the view expressed” (p. 9). Granted we are not able to always discuss the points with the individual whose position we are evaluating, in those instances thought we can use our questioning skills to ask ourselves questions as we identify these aspects of an article to then assess the position.

“Reasoning itself is drawing conclusions on the basis of reasons” (Nosich, 2005, p. 9). Another way to put this is that “reasoning” is the conclusion or position based on evidence or information presented. We need to keep this in mind not only when reading and evaluating information presented to us but also when we attempt to state our position on an issue and demonstrate to others how we arrived at that position.

Gerald Nosich as well as Richard Paul and Linda Elder support the use of elements of thought when assessing the reasoning and/or developing one’s reasoning. These elements are provided in a handout on page 2 of this CT Course Pack.

Another way of looking at how to identify the reasons in a discussion is to understand that “Reasons provide answers for our human curiosity about why someone makes a particular decision or hold a particular opinion” (Browne and Keeley, 2007, p. 25). They are “beliefs, evidence, metaphors, analogies, and other statements offer to support or justify the conclusion” (Browne and Keeley, 2007, p. 25). So after identifying the conclusion statement you can move to finding the reasons by asking yourself “why” relative to that conclusion statement. Another way of thinking about this process is that the conclusion represents the THIS in a statement and the reason represents the THAT. The statement to use to help you find the reasons is:

| THIS (conclusion) is true (or my position), because of THAT (reason(s)). |

Using this schema, as an example one might be able to pull from a written article the following:

<table>
<thead>
<tr>
<th>THIS</th>
<th>, because of</th>
<th>THAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every class should conclude with student evaluations.</td>
<td>1. Teachers can gain knowledge from their students about the course.</td>
<td>2. Students are able to feel like their participation in the course is valued.</td>
</tr>
</tbody>
</table>
3. Departments are able to receive information on various aspects of that course and teacher’s impact.

We will practice these skills in class and provide each other with the opportunity to give feedback and process the “reasoning out”.

**IDENTIFY THEN ASSESS/EVALUATE**

After identifying the conclusion and then the reasons we are able to begin “reasoning”. During this process we need to consider the elements of thought as well as the standards of thought (refer to p. 2 of the *CT Course Pack*). In addition to these also keep the following information in mind.

When evaluating the ideas of others and developing your own, it is important to distinguish **facts** from **opinions** and **assumptions**.

**FACTS** are objective, observable, and verifiable:

- The new Cadillac Seville weighs three thousand pounds.
- Fred Allen drank three martinis at lunch.
- Water freezes at 32 degrees Fahrenheit.

The car’s dimensions are objective -- they can be measured or determined by examining manufacturer’s specifications. A person's behavior can be observed by eyewitnesses. The freezing point of water can be verified by checking science books or performing a simple experiment. Facts, though accurate, may not provide sufficient evidence to support a thesis. Statistics, for instance, may be objective and accurate but are easy to misinterpret. The fact that reported cases of child abuse have increased does not prove that more children are being injured. It could indicate an increase in reporting or a change in the definition of "abuse."

**OPINIONS** express judgments that must be supported with evidence to be considered valid:

- The new Cadillac Seville is stylish.
- Fred Allen is an alcoholic.
- Cold water is the most refreshing drink.

What makes a car "stylish"? What constitutes an alcoholic? Why is cold water more refreshing than other beverages? All these opinions require further support for readers to accept them as being valid. A writer might list details about a car’s design to suggest that it follows most people’s concept of what makes a vehicle attractive. More evidence of Fred Allen’s drinking behavior would have to be presented, along with current medical research to suggest that he is an alcoholic. More information is needed to show why cool water refreshes a person better than iced tea, soda, or juice.
ASSUMPTIONS refer to things we believe to be true:

- Large cars are safer.
- Alcoholics can never return to social drinking.
- People should drink 6 to 8 glasses of water everyday.

Assumptions may be basic truths, which have been proven and reproven so that they are universally accepted without reservation. However, many assumptions are based on misinformation, obsolete data, or cultural traditions. Like opinions, assumptions should be tested. Students of critical thinking often refer to a famous 1936 poll, which confidently reported that Alf Landon would beat Franklin Roosevelt in the presidential election. The pollsters called people listed in scores of telephone directories. These random calls to men and women, blacks and whites, young and old, city dwellers and farmers, liberals and conservatives would, they believed, give them an accurate view of the electorate. But, their basic assumption was flawed. In the Depression, millions of people could not afford telephones. These poorer voters, who tended to support Roosevelt's New Deal, were never called. Despite the pollsters' hard work, their research failed because of a false assumption.
REFERENCES


