

## Page 2: Elements of Thought

### The Basic Building Blocks of Thinking

These basic vocabulary terms describe concepts which are present whenever reasoning takes place. It is essential that you understand each term. Consider each term from the perspective of the sender and the receiver.

#### 1. All reasoning has a **purpose, goal, or end in view**.

Whenever you reason, there is a purpose. This seems so obvious that you may wonder why it is important to discuss. Here are a few reasons;

Identify differing or conflicting purposes. People may have different, even conflicting purposes when reasoning. It is important to clarify the purpose each has. For instance, when buying a new car, the customer has a different purpose from the salesperson.

It is important to identify the best purpose. For instance, you may be evaluating different universities in order to decide which is the best one for you to attend. Is your purpose to stay close to your boyfriend or girlfriend? Is it to attend the best party school? Is it to get as far away from home as possible? Or, is it to find the best reputation or the school with a good placement record in your major, or the finest teachers?

Identify non-critical thinking motives. The primary purpose in all reasoning should be to discover what is true. But often we have other motives. For instance, we may want to win an argument. We may be trying to justify a preconceived idea. Or we may simply be trying to protect our ego.

Regarding the purpose, consider the following:

Take time to state your purpose clearly.

Distinguish your purpose from related purposes.

Check periodically to be sure you are still on target.

Choose significant and realistic purposes.

#### 2. **Issue**

All reasoning is an attempt to figure something out, to settle some question, to solve some problem. The function of an issue is to raise the question which will be answered by the reasoning process. This means that the issue is always a question. Though we frequently hear people use the word "issue" to describe topics, this is really incorrect. Notice that "capital punishment" is a topic, but it does not ask a question. There is no way to answer a question unless one is asked (at least implicitly).

To find the issue, try to figure out what question the author is trying to answer. One trick is to determine what the conclusion is, then figure out what question is being asked that the conclusion answers.

Here are some examples of issues;

Is capital punishment ever justified?

Should abortion remain legal?

Should I go to U.C.L.A.?

Whether or not gun ownership should be restricted?

Should the Headwaters old growth forest be purchased by the government?

Whether or not I should take an introductory philosophy course.

Important: Issues and "whether." Notice that some of these issues do not have question marks at the end. The word "whether" indicates that a question is being asked, even though the punctuation at the end of the sentence is a period. Here is how it works:

Sentences with the word "whether" take two opposing questions and push them together. Let's look at this example:

"Whether or not I should take an introductory philosophy course."

This sentence puts together the following questions:

"Should I take an introductory philosophy course?" and "Should I not take an introductory philosophy course?"

Regarding issues, consider the following:

Take time to clearly and precisely state the question at issue.

Express the question in several ways to clarify its meaning and scope.

Break the question into sub questions.

Identify if the question has one right answer, is a matter of opinion, or requires reasoning from more than one point of view.

### **3. Assumptions**

Assumptions are unstated reasons, which are essential in arriving at the conclusion.

For example:

Tom says, "Oh, you should take Dr. Jones. He's an excellent teacher." The conclusion is, "You should take Dr. Jones."

The only stated reason is, "He's an excellent teacher."

There is a gap between the reason and the conclusion. What makes Dr. Jones an excellent teacher? You might assume that what Tom thinks is an excellent teacher is the same as what you think is an excellent teacher. In this case, what makes an excellent teacher is the reason that is being assumed.

Remember,

Assumptions are unstated.

Assumptions are reasons, not conclusions.

**Value Assumptions:** Values are ideas that people think are especially important. Frequently when people take a position, it is based on a value they hold. For instance, a person arguing for nationalized health care values collective responsibility over individual responsibility. To successfully communicate, one must be aware of the value assumptions. Value conflicts must be dealt with if progress is to be made.<sup>1</sup>

**Descriptive Assumptions:** These are assumptions about how the world is. When looking for these missing reasons, ask whether or not the conclusion makes sense without some unstated reason. Identify what that reason is, and you've discovered your assumption.<sup>2</sup>

Regarding assumptions,

Clearly identify your assumptions and determine whether they are justifiable.

Consider how your assumptions are shaping your point of view.

#### 4. Frame of Reference

Two kinds of frame of reference must be considered;

World view

Role of the individual World View

We all reason from within a world view. A world view can be likened to an irremovable set of glasses which filter our perception of reality. Each person's world view can result in bias, prejudice, and misunderstanding. It is important to recognize that we reason from within a world view, and identify the ways that it can interfere with good reasoning.

Here are few examples of contributing factors which make up one's world view:

nationality  
sex  
language  
education  
parents  
religion  
age

place in history

### **Role**

The role which we play at any given time affects our reasoning. Roles are much more dynamic than world views. One's role can change throughout the day.

Here are a few examples of roles which can affect our reasoning;

pedestrian, motorist, teacher, student, parent, child, employee, friend

### Regarding Frame of Reference:

Identify your point of view.

Seek other points of view and identify their strengths as well as weaknesses.

Strive to be fair-minded in evaluating all points of view.

### **Related Term: Paradigm**

A paradigm is a model or representation of reality. It is a broader way of thinking about world views. An entire culture often share the key elements of a paradigm.

Here are some examples:

naturalism: The model which assumes that all that exists is matter.

theism: The model which assumes that there is a god who exists in addition to matter, and that this god created the matter.

nihilism: The model that says that claims about morality are without meaning.

## **5. Empirical evidence**

Empirical evidence is any evidence which can be observed either directly or indirectly by the senses. (Broadly, DATA, INFORMATION, and EVIDENCE.) It is important to consider the quality, amount, accuracy, and relevance of the empirical evidence. Most reasoning requires the support of empirical evidence.

Examples of empirical evidence:

Statistics

The pulse of a Geiger counter

The number of times your date arrived late.

The body, knife, and other items at a murder scene.

Skid marks at an accident scene.

The color and crispness of the lettuce at the store.

The humidity

The number of home runs Sammy Sosa has hit.

Consider the following:

Restrict your claims to those supported by the data you have.

Search for information that opposes your position as well as information that supports it.

Make sure that all information used is clear, accurate, and relevant to the question at issue.

Make sure you have gathered sufficient information.

## **6. Concepts**

Concepts are simply clusters of ideas; The result of abstract thinking. It is important to clarify your concepts, and to ask questions about the concepts of others. Do not assume that when one person uses a word that they attach the same concept to it that you do.

Examples of concepts which require clarification:

When a candidate says America needs change, what does the concept "change" mean?

When a person talks about freedom, what do they mean when they use that word?

Democracy, Capitalism, Education, Work, Family values

Regarding concepts:

Identify key concepts and explain them clearly.

Consider alternative concepts or alternative definitions to concepts.

Make sure you are using concepts with care and precision.

## **7. Inferences**

Inferences are conclusions or interpretations which are drawn by the receiver.

The reasoning process is intended to lead to some conclusion. When the listener, reader, or viewer accepts that conclusion, they have made an inference. Inferences are not limited to the main conclusion. One can make other inferences along the way.

NOTE: Inferences may be explicitly stated or implicit.

Example:

All men are mortal.

Socrates is a man. After looking at those sentences, you should infer or draw the conclusion that Socrates is mortal.

Regarding inferences;

Infer only what the evidence implies.

Check inferences for their consistency with each other.

Identify assumptions which lead you to your inferences.

(How do inferences differ from implications?)

## **8. Implications**

Implications are conclusions which are given by the sender.

The reasons in an argument are intended to lead to an implication.

For example:

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal. The first two sentences (the premises or reasons) imply or lead to the conclusion, "Socrates is mortal."

NOTE: Implications can be explicit or implicit. A frequent error is to think they must be unstated.

Regarding implications;

Determine where the evidence leads.

Be careful to avoid unwarranted assumptions.

Consider the further implications as discussed in the next point. . .

Inferences and Implications: How do they differ?

Implying is to reasoning what speaking is to communicating.

Inferring is to reasoning what hearing is to communication.

When we use words, one person speaks and others hear. The words are exactly the same, but our relationship to them is different. The sender speaks, the receiver hears.

In the same way, the sender implies and the receiver infers.

Remember, inferences and implications are both conclusions. Assumptions are unstated reasons. This means that we don't assume conclusions.

## **9. Results and consequences**

Reasoning is not static. Whenever we arrive at one conclusion, it follows that there are other things which are consistent with that conclusion. Sometimes we say, "If this is true, then what does that imply," meaning, "What other conclusions does this particular conclusion lead to," or "If this is true, then what else must also be true?"

For example:

Suppose Joe reasoned carefully about how to spend \$200 of discretionary income. He decides to spend a long weekend in Monterey. What is also true, if he goes to Monterey?

Joe is not going to spend that weekend in Chicago.

Joe cannot buy the stereo he was thinking of buying.

Joe won't be home to mow the lawn.

Another example:

All her life, Bernice was a religious person. She attended church, read her Bible, and prayed. She always thought that her life had an inherent purpose. She always sought God's direction for her life, and attributed many events in her life to that direction. Now she is going through a particularly rough time, and is rethinking her belief in God. Suppose she decides there is no god. What are the implications and consequences?

Bernice wasted her time attending church.

The Bible isn't true.

No one hears her prayers.

Her life has no inherent purpose.

The existence of life is a random occurrence.

People have no intrinsic value apart from what they give themselves.

She misinterpreted previous events. They were not God's direction.

Living a life of honor and worship to a nonexistent being is pointless. Now, suppose Bernice decides that there really is a god. What are the implications and consequences?

Bernice's current rough period of life must have some meaning or purpose and is worth enduring.

Life is not an accident. It has meaning and purpose apart from Bernice's interpretation of that meaning and purpose.

She is accountable to her creator.

Her prayers are not merely a ritual for the purpose of feeling better, but rather they are actual communication with her creator. Clearly, this is a short list, but it illustrates that reasoning is not done in a vacuum. The conclusions we draw are connected to many other things. It is important to consider those connections.

Regarding results, implications, and consequences;

Trace the implications and consequences that follow from your reasoning.

Search for negative as well as positive implications.

Consider all possible consequences.

1. Browne, M. Neil and Stuart M. Keely, *Asking The Right Questions* (Englewood Cliffs, NJ: Prentice Hall, 1994), 47-59.

2. IBID pp. 60-69.