Critical Thinking

From *Asking the Right Questions*  
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What is critical thinking?

1. Awareness of a set of interrelated critical questions.
2. Ability to ask and answer critical questions at appropriate times.
3. Desire to actively use the critical questions.
2 Approaches for Thinking

- **Sponge**
  - Advantages are:
    - provides good foundation & is mentally easy
  - Disadvantage is:
    - you can become a mental puppet.
Other Approach to Thinking

- Panning for gold
  - Active interaction with knowledge as it is being acquired.

- They work together– the sponge is knowledge, and knowledge is required for panning/evaluating.
Example: Reading material

- **Sponge**
  - Read carefully
  - Remember as much as possible
  - Underline/highlight
  - Take notes summarizing main points/topics
  - Mission is to find and understand what author says
  - Memorizes reasoning
  - Doesn’t evaluate

- **Panning for gold**
  - Reader asks self a number of questions designed to uncover the best available decisions/beliefs
  - Questions author’s claims
  - Makes notes to self in margins indicating problems with reasoning
  - Forms own conclusion
Short Example: Gun Control

- How convinced should you be?
- What concerns you about this passage?
Thinking and feeling

- Is there room for emotion?
- We bring personal baggage to every decision we make—experiences, dreams, values, training, and cultural habits.
- The point of critical thinking is to avoid this as much as possible, or at least delay it until the last stages of thinking.
Eleven Questions to Ask

- So, eleven might seem like a high number of questions to ask– but at this level of education these are all important.
- Some will become part of your thinking process automatically (or you might already be doing so) and others will take time to make them part of your thinking “routine.”
What are the issue and the conclusion?

- **Issue**
  - This is the controversy or the question.
  - Two types of issues:
    - Descriptive- raises questions about the accuracy of descriptions of the past, present, or future.
    - Prescriptive- raises questions about what we should do or what is right/wrong or good/bad.

- **Conclusion**
  - This is someone’s intended message to you for acceptance or a response to the issue.
  - They are NOT: examples, statistics, definitions, background info, or evidence.
What are the reasons?

- This is the “WHY?”
- Reasons are the beliefs, evidence, metaphors, analogies, and other statements offered to support or justify conclusions.

- REASONS + CONCLUSION = ARGUMENT
Which words or phrases are ambiguous?

- Consider multiple meanings of such words as freedom, obscenity, and happiness.
- Therefore we need further clarification before we can judge the adequacy of the reasoning.
- Once you determine something is ambiguous then:
  - Use context to define the terms:
    - Writer’s background
    - Traditional uses of the term
    - Words preceding and following the ambiguity
More on ambiguity

- Example- “human rights”
  - Norwegian government member defines as:
    - employed, free health care & adequate housing
  - American senator defines as:
    - freedom of speech, religion, travel, and peaceful assembly

- Ambiguity and loaded language
  - Often done purposefully
  - Example
    - Term: revenue enhancement
    - Emotional impact: positive response to tax hikes
What are the value conflicts and assumptions?

- **Value conflicts**
  - The differing values that stem from different frames of reference

- **Assumptions**
  - Hidden or unstated (in most cases)
  - Taken for granted
  - Influential in determining the conclusion
  - Potentially deceptive
We should not legalize recreational drugs. Illegal drugs cause too much street violence and other crimes.

Reason
Illegal drugs cause violence and other crimes

Value Assumption
Public safety is more important than freedom of choice.

Conclusion
Therefore: Recreational drugs should not be legalized.
What are the descriptive assumptions?

- Beliefs about the way the world is (not how the world should be…)
  - Identify the link between a reason and the author’s conclusion.
  - If the link between the reasons and the conclusion is flawed, be reluctant to accept the author’s conclusion.
Are there any fallacies in the reasoning?

- A fallacy is a reasoning “trick” that an author might use while trying to persuade you to accept a conclusion.
- Reject reasoning when the author:
  - Attacks a person or a person’s background, instead of the person’s reasoning
  - Uses slippery slope reasoning
  - Reflects a search for perfect solutions
  - Equivocates-- using key word with multiple meanings
  - Inappropriately appeals to common opinion
  - Presents a faulty dilemma (an Either-Or situation)
  - Engages in wishful thinking
  - Diverts attentions from the issue
  - Distracts with glittering generalities
How good is the evidence?

Kinds of evidence (all CAN be good)
- Intuition
- Personal experience
- Testimonials
- Appeals to authorities
- Personal observations
- Case examples
- Research studies
- Analogies
Are there rival causes?

- A rival cause is a plausible interpretation, different from one author’s interpretation, that can explain why a certain outcome occurred.
- Understand that multiple causes can exist for something.
  - Mass murder at a school:
    - Guns, parental neglect, t.v. violence, lack of religion, stress…
- Another fallacy is *Causal Oversimplification*
  - Explaining an event by relying on causal factors that are insufficient to account for the event or by over emphasizing the role of one or more of these factors.
- Instead say TV violence may be contributing to mass murders at schools— not TV violence causes mass murders…
Are the statistics deceptive?

Three kinds of deception:
- Concluding one thing, then proving another.
- Deceiving by omitting information.
- Confusing Averages:
  - Take this example:
    - Americans are better off than ever; the average salary of an American worker is now $35,000.
    - But there are three different ways to get an “average”:
      - Mean
      - Median
      - Mode
What significant information is omitted?

- Omitted information is inevitable because of:
  - Time and space limitations
  - Limited attention span
  - Inadequacies in human knowledge
  - Deception
  - Existence of different perspectives

- Now that you see it is bound to happen…
  - What do you do?
- You question the author- even if they can’t answer back- you might be able to fill in the blanks…
What reasonable conclusions are possible?

- Authors often overstep their own reasoning when they come to a conclusion.
- By identifying alternative reasonable conclusions, you can determine which alternative, if any, you would be willing to accept in place of the author’s conclusion.
- This is the final step in deciding whether to accept or reject the author’s conclusion.
Final Example

- Let’s work through an example on parental consent for teenage abortions.
- I know this is a touchy topic, but we are not here to lay feelings or emotion on the table—just to work through the eleven “magical” questions.
The End

- Any questions?