

*“All knowledge starts with doubt”
-Socrates*

Critical Thinking: What is It?

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What is Critical Thinking?

- “... thinking critically means screening your ideas to see if they really make sense” (Moore and Parker, “*Critical Thinking*”, 8th ed., p.2)
- “... critical thinking is the careful application of reason in the determination of whether a claim is true” (Moore and Parker, “*Critical Thinking*”, 9th ed., p.3)

What Makes You a Critical Thinker?

- You accept the *possibility* that your beliefs may be false.
- You have no *initial preference* of one belief over the other.
- You are able to consider *alternative* beliefs.
- You come to adopt or reject beliefs by coming up with *evidence* or other *reasons* for or against those beliefs.
- You *actively investigate* or *test* different beliefs.
- Your *confidence* in your beliefs is *proportional* to how much *reason* you find for that belief.
- You are able to *admit* that you don't know.

The Generation and Evaluation of Ideas and Beliefs

- Critical thinking roughly consists of two parts:
 - 1. The *generation* of possible ideas, concepts, views, beliefs, or answers with respect to some issue or question.
 - 2. The *evaluation* of those generated beliefs in order to figure out which make sense and which don't, which is true and which is false, which is good and which is bad, or which we should accept and which we should reject – or which we should suspend judgment on because we just don't have enough to work with
- In short: a good critical thinker has an open mind, but not so open that their brain is falling out!

A Common Myth about Being Critical

- Many people incorrectly equate being critical with being dismissive, cynical, or negative: "You are such a critical person!"
- However:
 - First of all, when you are critical of a certain belief, you merely consider the *possibility* that a certain belief is false; you do *not* automatically reject that belief.
 - Second, if you had good reasons to reject that belief, then that belief was probably false, and eliminating false beliefs is a *good* thing!

Critical Thinkers as “Belief-Inspectors”

- A critical thinker is to beliefs as what car-inspectors are to cars:
 - A car-inspector will look carefully at your car to make sure it is still fully ok
 - This does not mean that your car isn't ok; the car-inspector may well say that everything checks out ok
 - If the car is not ok, it is annoying: it costs money, and it could even be a bit embarrassing.
 - But, ultimately, we should be glad (and, often, we *are* glad) that the problem was discovered, and that the car was fixed.

Critical Thinking as a Cornerstone of Civilization

- *Philosophy* can be understood as critical thinking with regard to difficult/big issues.
- *Science* (the scientific method) is basically a highly formalized method of critical thinking.
- *Democracy* can be seen as a place where people are given an opportunity to express and criticize ideas – a “market place of ideas” in which a wide variety of beliefs can be expressed, and in which, after critical reflection and discussion, we choose (elect/vote for) the ones that we prefer.

Lack of Critical Thinking

- Unfortunately, there is a real lack of critical thinking around us.
- Why is that?

Why People Are Not Critical I

- Habit
 - It's hard to change our thinking patterns
- Difficulty
 - It can be hard to generate or evaluate alternative beliefs. Sometimes we can't comprehend suggested ones
- Laziness
 - We don't want to spend the time and effort
- Futility
 - Being critical does not guarantee any kind of improvement in our beliefs.

Why People Are Not Critical II

- Content
 - We like certain things to be true or not be true
- Social
 - We desire acceptance and fear rejection by people around us that tell us what to believe
 - Looking like you know what you do or what you're talking about gives you a certain social status
- Personal
 - We hate to lose the 'investment' we put in our beliefs
 - We hate to change our ways based on our beliefs
 - We like certainty and hate uncertainty
 - We identify with our beliefs

Wishful Thinking

- We often like certain beliefs to be true.
- For example, we like to think that we are a good person (close to 100% of all high school students believe that they were 'more popular' than average, 80% of drivers rate themselves in the top 30% of drivers, and 94% of teachers rate themselves as better than average teachers!)
- It would also be nice if there is a God, if prayer cures cancer, etc.
- Wishful thinking frequently makes us believe exactly that what we want to be true, and at the same time makes us uncritical of those beliefs as well.

Herd Instinct, Partisan Mindset, and Leadership

- Humans are very social animals, and we have a lot to gain or lose depending on our social status. Thus, we tend to do three things:
 - 1. *Herd Instinct*: We are quick to accept the beliefs of those around us (family, friends, culture, etc.): we would hate to come off as being critical of those beliefs, as they may result in being rejected from our support group.
 - 2. *Partisan Mindset*: We reject the beliefs of other groups, since they are, as a group, in competition with our group. Thus, we adopt a ‘Us vs Them’ Mindset: ‘We are right, and they are wrong!’.
 - 3. *Leadership*: Within the group that we’re in, it is best to be ‘on top’. To be a leader, however, you must take control, and act as if you know what you are doing. As such, believing *something* (whether it is true or bad), and *holding on* to that belief, is better than trying to figure out what’s best. Indeed, admitting that you don’t know what’s best is often considered a sign of weakness.

Beliefs and Actions

- Whenever, we make a decision, we rely on our beliefs: Beliefs are what we act upon. This makes us uncritical of our beliefs in 2 ways:
 - 1. We hate to find out that in the past we have acted on bad beliefs, since as such we may have to admit that we have done harm.
 - 2. We hate to change our daily routines as the result of changing our beliefs (laziness), especially if they seem to work fine (futility).

Certainty and Uncertainty

- We like to have a sense of certainty, even if that is a false one, for having a definite belief means:
 - 1. that we don't have to spend time and effort to really think about what we're doing: we can just do it.
 - 2. that we can take control, which is good for our social status within the group that we live in.
- Especially when it comes to the 'big' questions in life ('What should I do with my life?', 'What happens when I die?' etc.), we grasp for whatever answer is able to relieve us from the uncomfortable feeling of not knowing the answer.

Being Right and Being Wrong

- We love to be right, and hate to be wrong!
- Our beliefs are a big part of who we are: how we see, define, and identify ourselves. Thus, we hate to be critical of our beliefs, as that would amount to being critical of ourselves!
- Also, there is again a lot of social status to be lost if we would admit that we were wrong about something: Leaders are strong-headed (even if that means pig-headed!).

Biological Obstacles to Critical Thinking

- Many of the obstacles to critical thinking have a straightforward biological explanation:
 - habit and a sense of certainty allows us to act quickly (the ‘Perfect Deliberator’ will simply not survive in a hostile world)
 - there is strength in numbers (herd instinct), there is competition between groups (partisan mindset) and within a group, it is good to be ‘on top’ (social status)
 - and wishful thinking probably provides a positive outlook that keeps you going

So should we be more critical?

- Many of the reasons just provided for why we are not critical thinkers are actual reasons for not becoming one either:
 - Critical thinking can offend, alienate, and even lead to cynicism or maybe even depression
 - Sometimes, ignorance really is bliss!
- So should we be more critical?
- Here are some reasons *for* being more critical:
 - It can help you form better beliefs, and having false beliefs can ‘bite you in the butt’.
 - In fact, having better beliefs will often prevent *others* from being hurt as you act on your false and mistaken beliefs
 - Becoming a critical thinker is an ethical thing to do and makes you a better citizen!

Critical, Creative, and Constructive Thinking

- This semester we are going to spend much time on evaluating existing pieces of reasoning.
- Thus, despite what I said earlier about ‘critical’ not being the same as ‘negative’ or ‘destructive’, you will probably get exactly that feeling nevertheless.
- However, as we will evaluate these pieces of reasoning, you will find that often, some of the best criticisms are based on the consideration of other possibilities.
- And, coming up with such alternatives is a creative process, which should translate into an ability to constructively generate your own ideas and supporting arguments as well.