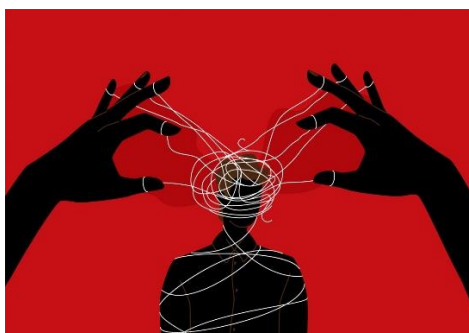


## Critical Thinking 101



By Michael V. Farnum

*“Thinking makes you act effectively in the world.*

*Thinking makes you win the battles you undertake . . .*

*If you can think and speak and write, you are absolutely deadly.”*

*--Jordan Peterson (2017, Maps of Meaning, YouTube.)*

Akin to discernment and good judgment, critical thinking is an essential skill to navigate this world not only effectively but optimally. The absence of critical thinking can easily hinder one, personally and professionally, in maintaining our relationships and in achieving our life goals. Employers often utilize critical thinking assessments to filter out the best candidates. Lacking this skill, one can easily be led astray and fall prey to countless biases, logical fallacies, deceptions (by self and others), manipulations, propaganda, gaslighting, hypocrisy and outright lies. In the absence of critical thinking there can be little semblance of healthy debate or sane and enlightening dialectic exchange within our society.

This is a skill rarely taught, except at the highest levels of education, if even then. Critical thinking is a skill which goes hand in hand with that of emotional regulation, another important practice rarely taught outside of therapy or esoteric teachings largely introduced via the New Age movement. If one is unable to remain calm and in control of one's emotions under duress, the cerebral cortex quickly goes offline, thus rendering one virtually incapable of clear and rational thinking, let alone critical cognition.

Perhaps this is all by design for various reasons, but this is a debate far beyond the scope of this essay.

The Encyclopedia Britannica describes critical thinking as a “mode of cognition using deliberative reasoning and impartial scrutiny of information to arrive at a possible solution to a problem.” (Brittanica.com, 2024.) The term is generally credited to educator/philosopher John Dewey and was introduced in the book, *How We Think* (1910.) Dewey developed the concept as a core instructional component in opposition to the mainstream educational paradigm stressing rote memorization and the mechanistic regurgitation of facts and figures by students.

In broad strokes, critical thinking can be broken down into a handful of core components:

- 1) Deconstructing a problem into its constituent parts to reveal its underlying logic and assumptions;
- 2) Recognizing and accounting for ones own biases or cognitive distortions in judgment or experience;
- 3) Collecting and assessing relevant evidence via information gathering, personal observation or experimentation;
- 4) Adjusting and re-evaluating ones own thinking in relation to the problem at hand;
- 5) Forming a reasoned assessment to propose a solution or offer a better understanding of the issue (Brittanica.com, 2024.)

Meyer (2023) describes the Four Pillars of critical thinking as the following: analysis, interpretation, evaluation and self-direction.

Yet another crucial aspect of critical thinking is induction vs. deduction. Do you know the difference between induction and deduction? Merriam-Webster (2024) defines induction as “the inference of a general conclusion from particular instances” while deduction is “inference in which the conclusion about particulars follows necessarily from general or universal premises.” Huh? In simpler language, deduction involves starting with a general or basic hypothesis and using logical deductions to prove it. For example, tigers are felines. All felines have claws. Therefore, all tigers have claws. Inductive reasoning moves from specific observations to general theories or conclusions. Example: Spotting the same person everyday for a month coming into your Starbleck’s to order a latte and inferring that he/she comes into the place the same time every day, always, forever and ever. This may or may not be the case. It probably isn’t. While inductive reasoning can be useful it is arguably more prone than deduction to flawed logic. Induction relies on indirect observations based on larger points of data

that usually cannot provide the whole picture. In deductive reasoning of course it is essential to begin with a valid premise.

The third method of reasoning is known as abduction. Abduction is defined as “a syllogism in which the major premise is evident but the minor premise and therefore the conclusion are only probable” (Merriam-Webster.com, 2024.) In this case, think of a detective who encounters a crime scene involving a missing (abducted?) person, a half-eaten sandwich and a rotting human tongue lying on the kitchen floor. Depending on the complexity of the situation, one may rightfully or not abduct the most logical scenario while many unanswered questions remain. So many questions . . .

Speaking of questions, critical thinking has its roots in the Socratic method, a form of logical debate practiced in ancient Greece and largely attributed to the philosopher Socrates (c. 470-399 BCE). (Brittanica, 2024.) According to the mainstream narrative, the methods of Socrates were famously revealed by his pupil Plato and the conversations recreated in Plato’s famous works, most notably “The Apology of Socrates.” “The Apology” is an accounting of three of Socrates’ speeches during his trial for heresy and false teachings in 399 BCE. The Socratic method or Socratic questioning has become a popular pop cult term describing an educational method of critically cross-examining students by a teacher, and is also widely utilized in cognitive behavioral therapy.

### Logical Fallacies

In practical terms, cognitive thinking includes the ability to recognize and suss out myriad logical fallacies perpetrated, consciously or not, in everyday conversation and social media banter, in debates, in arguments, and within the ubiquitous media barrage of modern-day society.

**Ad hominem attacks (character assassination):** Attacking a person and their character or reputation to undermine their argument. Ex: *After delivering an eloquent argument describing the troubling overreaches of largely undisclosed government surveillance practices upon their citizens, your opponent asks the audience, How can we believe a person who consorts with crazy conspiracy theorists, refuses to get vaccinated and wears such weird clothes?*

**Tu quoque (French for You also):** Avoiding criticism by turning the same argument back on your opponent. Ex.: *In a heated public debate, the infamously corrupt Blue candidate self-righteously accuses her equally dishonourable Red candidate of committing heinous acts of plagiarism, insider trading, improprieties of public funds, and outrageous sexual shenanigans. Of course, the indignant Red candidate spews the same toxic rhetoric right back at the Blue.*

**Personal Incredulity:** Stating that because one finds something hard or impossible to believe, therefore it cannot be true. Ex.: *My beloved spouse, or our trusted government,*

would never lie to me. This is simply inconceivable. My honey loves me, and so does the government, beyond reproach. You saw aliens at the mall? Come on, man! . . .

**Special Pleading:** Moving the proverbial goal posts after ones argument is shown to be false. Ex.: *Madame Blavatsky's claims of psychic prowess are disproven under stringent scientific conditions. When confronted with these facts, the mercurial Mme. Blavatsky simply claims that her powers were temporarily rendered ineffective because her skeptics lacked faith in her prominent psychic abilities.*

**Loaded Questions:** Attacking ones opponent with an argument that presupposes an assumption such that it can't be answered without sounding guilty. Ex: *Anjelica and Jen are both romantically interested in Brad. One day, well within earshot of handsome Brad, Jen asks Anjelica how well her fungal yeast infection is doing.*

**Begging the Question:** Asserting a circular argument in which the conclusion is included within the premise. This one is often paired with the Ad Hominem personal attack. Ex.: *The words of the great and legendary masterful guru Mykhal the Great are beyond question or reproach. We know this because it says so in the masterful guru's self-published book, The Words of the Legendary Masterful Guru Mykhal the Great are Beyond Question or Reproach.*

**Burden of Proof:** Stating that the burden of proof lies with another, not the one making the claim. *The famous Dr. Kiko wildly claims that he believes there are aliens currently at war on the moon, and because no one on Earth can disprove this, it must be a valid claim.*

**The Gambler's Fallacy:** This is one commonly seen not only in so-called real-life but also in movies depicting the anti-hero, the down-on-his luck addict or gambler. It is the false belief or claim that one is inevitably due for a lucky streak, or statistically independent phenomena, to change his/her misfortunes around. See "The Gambler" (1974), "The Color of Money" (1986) or "No Country For Old Men" (2007) as a few classic examples.

**The Strawman:** Misrepresenting your opponent's argument to make it easier to attack. Ex: *Donald the famous politician publicly stated that people should be nice to puppies. Nancy, Donald's political opponent, fiercely rebuked him for inferring that we should be mean to kittens.*

**The Texas Sharpshooter:** This is cherry-picking data to support an argument or searching for a pattern which fits a presumption. Ex: *The makers of the sugar-charged Toxicoco power drink point to their research which shows the top 5 countries where their drink is sold are also proven to be among the healthiest countries in the world. Therefore, Toxicoco must be good for you.*

**The Fallacy of Genetics:** Judging something or someone as good or bad based on where it comes from. Ex: *The proprietor of a hotel touts his establishment as the best place*

to stay because “All the Best People Come Here.” This is also close to the **Bandwagon fallacy**, appealing to popularity as an attempted form of validation.

And, finally, here is one of my personal favorites to look for . . .

**Ambiguity:** A common ploy in gaslighting, using double meanings to mislead others or obfuscate the truth. This can be used intentionally or unintentionally. **Ex:** *A defendant in court for unpaid parking fines tells the judge the sign in question read, Fine for Parking, so the defendant allegedly presumed it was fine to park there.*

**Ex.:** *I know Big Bill very well; he would never have sexual shenanigans with that wonky honey pot.* Can you spot the ambiguities?

The ancient historian Herodotus (484-425 BC) reportedly stated, “It is my duty to record what I am told, but I am not bound to believe in it” (Pearson, 1941.) In a more modern tenet, Toltec philosopher and author Don Miguel Ruiz (2011) kindly advised, “Be skeptical but learn to listen.” Or, as I have often translated it: Listen, but don’t believe half of what you hear. As the old cliché suggests, common sense is not common, and given the state of the world today (perhaps at any given time in history) the art of critical thinking seems to be an elusive one.

To be continued . . .

## References

Brittanica.com. (updated 1/11/24). *Critical Thinking*. Article by Will Gosner.

Referenced 1/19/24. <https://www.brittanica.com/topic/criticalthinking>

Dewey, J. (1910.) *How We Think*.

Merriam-Webster.com. (2024.) *Abduction*.

Referenced 1/19/24. <https://www.merriam-webster.com/dictionary/abduction>

Merriam-Webster.com. (2024.) *Deduction*.

Referenced 1/19/24. <https://www.merriam-webster.com/dictionary/deduction>

Merriam-Webster.com. (2024.) *Induction*.

Referenced 1/19/24. <https://www.merriam-webster.com/dictionary/induction>

Meyer, P.I. (2023.) *The Four Pillars of Critical Thinking: 103 Techniques and Hacks to*

*Improve Your Work and Personal Life by Mastering Mental Skills*. Mind Mentor.

Pearson, L. (1941). Credulity and Scepticism in Herodotus. *Transactions and Proceedings*

*of the American Philological Association*, 72, 335–355. <https://doi.org/10.2307/283060>

Peterson, J. (2022.) *Jordan Peterson: Critical Responses*. Open Universe.

Plato, Cooper (translator), Hutchinson (editor). (1997.) *Plato: Complete Works*.

Hackett Publishing.

Ruiz, Ruiz and Mills. (2011.) *The Fifth Agreement: A Practical Guide to Self-Mastery*

*(Toltec Wisdom.)* Amber-Allen Publishing.