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A Short Guide to Critical Thinking

Originally written for the Australian Humanist magazine, Oct 2024 Critical thinking is the activity of carefully applying our intellect to form beliefs informed by the best available evidence and reasons, while reducing the impact of bias and other sources of error. Thinking critically is not something that comes easily or naturally to most, but like...

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Critical thinking is the activity of carefully applying our intellect to form beliefs informed by the best available evidence and reasons, while reducing the impact of bias and other sources of error. Thinking critically is not something that comes easily or naturally to most, but like other skills it can be learned through study and practise. In this article I want to share some thoughts and advice which I think are valuable for helping to improve our critical thinking.

1. Avoid the conflation of critical thinking with appealing to logical fallacies or cognitive biases. While lists of fallacies and biases can be entertaining and informative in certain contexts, ample empirical evidence indicates that simply learning about them does little or nothing to reduce our susceptibility. Indeed, there is a danger that we may use these intelligent-sounding labels to dismiss viewpoints or sources we disagree with before actually giving them proper consideration. Furthermore, many informal fallacies and biases are highly contextual, being appropriate methods of inference in some circumstances but inappropriate in others. As an example, appeals to authority are valid if the authority has expertise in a field relevant to the claim being made, if they accurately represent the state of knowledge in that field, and where the field in question follows epistemically sound methods of inquiry. These are all subtle issues which can seldom be adjudicated by simply uttering the name of a fallacy. Overall, logical fallacies and cognitive biases can be helpful tools for improving critical thinking, but appealing to them thoughtlessly, or as a substitute for careful engagement of specific claims, is typically unhelpful.
2. Be skeptical of your judgements and intuitions. Humans have a natural inclination to uncritically accept beliefs that seem obvious or intuitive to us. Ideas, beliefs, or explanations may seem plausible or intuitive because they are familiar, easy to imagine, emotionally satisfying, or because of our own unrepresentative life experiences. None of these factors, however, actually make a belief or idea more likely to be true. It is therefore important that we learn to distinguish between our subjective sense of plausibility or reasonableness of an idea on the one hand, and the objective evidential support for the idea on the other. The first step to doing this is developing the habit of making the distinction in our minds. When exposed to new ideas or information we should think ‘while this seems plausible to me, but

what objective reasons do I have for thinking it is actually true'? Conversely, if we think something is nonsense, we should ask ourselves 'this seems silly or absurd to me, but what objective reasons do I have for rejecting it'? To help make this distinction, I sometimes imagine that I need to write an essay on the subject that would be critiqued by experts, or must argue the case to convince a jury in court. What arguments would I give which would have a chance of being convincing in such circumstances? If all I can appeal to is gut instinct or vague appeals to plausibility, then I may not have much objective justification for my position. Applying this technique can also help in highlighting gaps in our knowledge, and finding uncertainties that we need to resolve before being able to make a firm judgement.

3. Seek out challenging and disconfirming information. When forming our opinions, it is common to make substantive inferences on the basis of the absence of certain information. For example, we infer that because we have never heard a compelling argument for something, therefore there must not be any. Or we reason that because we have seen no counterexample, there are no such counterexamples. The problem with such thinking is that we cannot rely on just happening upon such information by chance, especially if we primarily interact with people who agree with us. Instead, we need to make proactive efforts to seek out information that conflicts with our beliefs. Our ignorance of any good counterarguments or examples is only compelling if we have made a good faith effort to find them. Similarly, we should not stop investigating an issue as soon as we find evidence that supports our preconceptions. It is important to take the next step, asking ourselves 'how would someone who disagrees respond to this?', and 'what do I currently not understand about this issue?'. As long as there are aspects we do not understand, there may be major gaps in or arguments or important counterarguments we simply haven't thought of. Overall, it is crucial to develop the habit of seeing arguments and evidence as helping us to form more accurate beliefs, rather than as weapons to bludger our opponents with when they challenge us.
4. Try to understand why people disagree. While it is natural to tacitly assume that those who disagree with us on important issues are either ignorant or immoral, in fact there are many reasons why thoughtful, honest people may disagree. They may have access to different information, evaluate information differently given their

perspectives and experiences, or have thought through issues in greater clarity or depth then we have. Another possibility is that we don't really disagree with us as much as we thought, but rather tend to use certain words differently to us which led to talking past one another. Without making an effort to understand why people disagree with us, we will never have the opportunity to learn from them, or understand the limits of our own views. Of course, not everyone with who disagrees is worth interacting with, and learning when to engage is an important skill in itself. Indeed, one important component of the practise of critical thinking is cultivating a group of thoughtful people who disagree with us, either whom we know personally or whose public work we follow. Fostering exposure to such a diversity of thought helps us to avoid dogmatism and expand our intellectual horizons. It is also valuable for helping is find flaws or defects in our own perspectives, which can often go unchallenged if we only associate with people who agree with us.

5. Clearly articulate our views in a public setting. Sharing our views publicly, ideally in written form (such as on a blog), is that it forces us to make our vague collections of ideas and feelings on a topic more precise, and outline them in a logical order. This nearly always helps to highlight inconsistencies or gaps in logic, which become clear during writing or speaking but often remain elusive if we keep our ideas to ourselves. Another benefit of clearly articulating our views is that it helps to highlight imprecision, such as when we find ourselves describing amorphous groups using words like 'them' rather than being specific, or when we use loose terms like 'goes along with' rather than making clear causal claims. It can also highlight quantitative claims that might otherwise be obscured, for example using language about something being 'large' or 'increasing' without presenting any data to indicate the magnitude of such effects. Sweeping generalisations are easier to catch in written form, and the requirement to provide examples to illustrate our point can help substantiate our arguments, or conversely help us to realise that no such examples can be found. A final benefit is that going on the record about our views helps hold us accountable for when we are wrong, making it more difficult for us to exercise hindsight bias and convince ourselves that 'we knew that all along'.
6. Develop a joy for learning about a range of topics. Critical thinking is often reliant upon domain specific knowledge, and it is therefore useful to acquire knowledge in

a broad range of fields in order to improve our reasoning skills. It is important to focus on sources that provide genuine substance and develop meaningful understanding of a topic, instead of superficial coverage of selective attention-grabbing areas. Avoid breezy, speculative, opinion-based coverage which does not provide much actual insight. Typical news coverage focuses on the spectacular, the controversial, and the emotive, and does not make much effort to provide the audience with in-depth nuanced understanding of background knowledge or underlying theory. As such, instead of asking 'what is new?' or 'what is trending?', it is more informative to ask 'why is this happening?' and 'how does this relate to what has gone before?' The more we add to our stock of understanding about the world, the better will we be able to make informed judgements about the strength of arguments or the plausibility of different explanations.

Thinking critically is more than a set of words or tricks to deploy during a heated argument. Rather, it is an interrelated series of habits of mind to be honed through long practise. Like all habits, they take time to acquire and can be forgotten if not regularly used. We don't become good critical thinkers simply by being clever or deciding to be more rational. It takes concerted practise and sustained effort to develop habits like exercising skepticism of our own judgements and intuitions, deliberately seeking out challenging information, exploring why people disagree with us, publicly articulating our opinions, and cultivating a joy of learning about the world and how it works. As we implement these and other strategies than over time, little be little, we can improve our ability to think and reason, and hopefully build a more accurate set of views about the world.

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