Critical Thinking: The Basics

Stuart Hanscomb

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INTRODUCTION

WAKING UP TO BAD ARGUMENTS

> My husband says I'm argumentative. He's wrong though, and here are three reasons why ...
>
> (Sacha T. Burnstorm, pers. comm.)

I wake up this morning to be told on the news that a culture that forces people to get up early and start work at 9 is a form of 'torture'. I hit the snooze button and wonder if an appeal to human rights could save me from having to give my 9 a.m. lecture. Unchangeable bodily rhythms and the idea that we're better suited to 10 or 11 o'clock starts seem very important, but even if the hypothesis is correct, have our lives thus far really been 'torture'? Sleep deprivation is a well-known method of cruel and unusual punishment, but anyone who has endured it might be rightly dubious of classifying an early start in this way. It's good for headlines though.

I shuffle to the kitchen and put the kettle on. Soon my 3-year-old son appears, yawning, looking for his breakfast. 'Would you like brown flakes or yellow flakes?' I ask, knowing this is what's called a 'false dichotomy'. There are several other cereal options but this keeps things simple. As wilful as he can be, he seems content to have his options framed in this narrow way first thing in the morning. Hopefully this isn't a form of torture.

Cycling to work, I take a route past a big field of cattle. There is a hedge that I can see over, and the sight of my moving head seems to spook one of the animals. He starts to run with me, parallel to the road along the side of the hedge. As he passes other cattle, they start galloping as well and before long I have caused a stampede. After about 20 seconds the original runner slows to a halt and the others do the same. They herd again, snorting and steaming, looking agitated, and possibly slightly embarrassed.

I have picked up speed and become aware of my reluctance to use the smallest and largest gear cogs (first and sixth) on my bike. Brief reflection shows me that this is conditioned response caused by the disintegration of the gear mechanism on my previous (ancient and dilapidated) bike, which meant that the use of these gears ran a high risk of the chain falling off. There is no reason to think that would happen with my new bike, but the learning has transferred itself and I limit myself for no reason.

Most animals and toddlers are not what we would call 'critical thinkers', but nor are we much of the time. This series of events is no exaggeration. Poor reasoning and the absence of reasoning on occasions where it would serve us well are everywhere. Life is typically fast-paced and mistakes will happen, but even when things are slowed down (for example, drafting a speech rather than being interviewed on the radio), we think erroneously in predictable ways.

Adding to our vulnerability is that bad arguments are often persuasive – entertaining even – impeding our ability and motivation to put them in their place. Professional persuaders (working in, say, politics or marketing) know two important things:

1. our critical thinking capabilities are not what they might be, and
2. the particular forms of persuasive communication that make us less likely to pay attention to, or even look for, poor reasoning, and that are therefore more likely to win us round to their point of view.

Arguments based on dubious, partial or irrelevant claims can be remarkably effective if they target our cognitive and emotional biases.

0.1 WHAT IS CRITICAL THINKING?

This is a book about how to avoid reaching the wrong conclusion in everyday, professional and academic contexts. The fundamental subject matter of critical thinking is the reasoning we apply in a wide variety of circumstances, and its aims are twofold:

1. to improve our ability to reason and generate strong arguments;
2. to improve our ability to assess the strength of the arguments used by others.

Since we should assess our own arguments by the same standards we use to assess the arguments of others, then these aims are very closely aligned. Also, a substantial part of our overall argument on an issue is an assessment of the arguments of others. As the nineteenth-century philosopher John Stuart Mill put it:

> When we turn to ... morals, religion, politics, social relations, and the business of life, three-fourths of the arguments for every disputed opinion consist in dispelling the appearances which favour some opinion different from it.
>
> (1962, p. 163)

ARGUMENTS

Although later chapters will provide more technical and detailed information about the structure and components of arguments, the basic concept of an argument is quite straightforward. There is little disagreement among academics as to what they are, and below are some examples of definitions:

> An argument is an attempt to prove or establish a conclusion. It has two major parts: a conclusion and the reason or reasons offered in support of the conclusion.
>
> (Ennis, 1996a, p. 2)

> By 'argument' we mean a claim, together with one or more sets of reasons offered by someone to support that claim.
>
> (Johnson and Blair, 2006, p. 10)

> [Arguments are] characterized by a particular structure, where one or more statements ... are given in support of a conclusion.
>
> (Tindale, 2007, p. 1)

> 'T o give an argument' means to offer a set of reasons or evidence in support of a conclusion.
>
> (Morrow and Weston, 2011, p. xvii)

BOX 0.1 WHAT IS AN ARGUMENT?

These definitions state that an argument is comprised of:

1. *A claim being asserted* that we want other people to believe is true.
2. *Reasons offered in support of this claim* through which we try to convince other people that this claim is true.

Here is your initial piece of critical thinking terminology. While the claim being asserted is simply referred to in critical thinking as a **conclusion**, a reason offered in support of a conclusion is known as a **premise**. Someone might assert that we should not eat meat. We ask for their reasons and they say that it is better for our health, for the environment, and is less cruel to animals. Whether or not we think this is convincing, they have unquestionably presented us with an argument. That we should not eat meat is the conclusion, and the health, environmental and animal welfare benefits are the premises.

This meaning of argument, then, does not refer to 'having an argument' or a 'having a row' with someone, as in a bad-tempered **dialogue** based on a disagreement. If we are 'having an argument' with someone, then arguments (in the sense of conclusions with supporting reasons) will be put forward or implied, but the two uses of the word are clearly very different.

The context in which arguments are put forward is, though, one of disagreement. The reason for offering an argument is usually to provide the other person with reasons for believing something which you want them to believe, but which they do not currently believe. (I say 'usually' here because 'preaching to the converted' can involve

arguments, but in these cases they are used to re-enliven people's beliefs, often with the intention of encouraging action rather than just verbal agreement.) Not all conversations involve arguments, but many do. We talk to each other for a number of reasons – to entertain and be entertained, to inform and find out information, to offer and seek explanations – but an important purpose of conversation is to express our view on an issue. Often when we do this, the other person will ask why we hold this view and our response will usually take the form of an argument.

DEFINING CRITICAL THINKING

Definitions of critical thinking tend to correspond with this definition of arguments. If an argument is a conclusion plus premises (reasons given in support of the conclusion), then critical thinking is the process of identifying what the argument is that is being put forward, and determining whether or not the premises justify accepting the conclusion (in other words, assessing whether it is a good argument or not).

Robert Ennis, author of one of the most influential textbooks on the subject, defines critical thinking as: 'reasonable reflective thinking focused on deciding what to believe or do' (1996b, p. 166). Ennis' reference to 'doing' as well as 'believing' indicates critical thinking's emphasis on deliberation and decision-making. It is very much an applied area of study that intends to teach knowledge and skills that have a clear practical application.

American philosopher John Dewey is often credited as being the originator of critical thinking as a field of study. In his book, *How We Think*, Dewey defines what he calls 'reflective thinking' as: 'Active, persistent, and careful consideration of a belief ... in the light of the grounds which support it' (1910, p. 6). 'In some cases,' he says:

> a belief is accepted with slight or almost no attempt to state the grounds that support it. In other cases, the ground or basis for a belief is deliberately sought and its adequacy to support the belief is examined. This process is called reflective thought; it alone is truly educative in value.
>
> (Ibid., p. 2)

Dewey's choice of words – 'active', 'persistent', 'careful' – indicate the emphasis critical thinking places on a responsible and effortful marshalling of our thoughts. Instead of passively accepting what appears right on the surface, or what we've always believed, we *actively* consider whether something should be believed or not. The 'stream or flow' of ideas that pass through our mind becomes a 'chain, or thread' (ibid., p. 3) – we impose on them an order that allows us to assess whether they should be believed or acted upon.

How, then, do we bring order to our unruly thoughts and become critical thinkers (or better critical thinkers)? There are three aspects to this:

1. Theoretical knowledge about arguments, rationality, and all of the other elements covered in books like this one.
2. Practice – *a lot of practice* – in applying this learning to examples of arguments and exchanges between people that involve arguments and counter-arguments.
3. Self-reflection on how we form our beliefs and how we interact with others.

Advice with respect to how this book can facilitate the second of these can be found at the end of this chapter (and I would urge you to read this section carefully, since to get the most from this subject, it is vital to combine what textbooks offer with external experiences and materials).

With respect to the third point, although critical thinking is about avoiding errors in our reasoning and assessing the quality of arguments, in a very important sense, it is also about *us*. It is about us as human beings, vulnerable to biases in our thinking, to moods and emotions that cloud our judgement, and to character dispositions that entrench these tendencies. And it is about us as individuals with a desire to know more about our own particular strengths and weaknesses and how to eliminate, mitigate, and improve upon them.

This book, then, is about how we can improve our thinking so that we become better disposed to making good judgements, and it is also therefore about self-knowledge: greater awareness of the aspects of psychology and character that are relevant to constructive

deliberation and improved decision-making. Put another way, critical thinking can contribute to self-improvement, and knowing about the self can help improve critical thinking. This book considers the importance of critical thinking as part of the wider question of how to live well.

0.2 CRITICAL THINKING AND THE SPIRIT OF PHILOSOPHY

Critical thinking's historical origins can be identified in two foundational features of Western philosophy: (1) commitment to truth (even in the face of social and political pressures to remain ignorant); and (2) the individual's development of virtues associated with wisdom and sound judgement (with self-knowledge among the most prominent). In what is often taken to be the seminal work of modern philosophy, René Descartes opens his *Meditations* (originally published in 1641) with the following resolution:

> It is some time ago now since I perceived that, from my earliest years, I had accepted many false opinions as being true, and that what I had since based on such insecure principles could only be most doubtful and uncertain; so that I had undertaken seriously once in my life to rid myself of all the opinions I had adopted up to then, and to begin afresh from the foundations.
>
> (1968, p. 95)

Descartes is expressing not just a desire for truth, but recognition that the search for it must involve self-examination. In the eighteenth century, Enlightenment thinking championed reason over superstition and tradition in politics and ethics as well as science. Reason was regarded not just as the route to the truth, but as a virtue that benefits the individual and society. Through reason comes progress, and to be willing to apply rational thinking to all issues is to take responsibility for one's destiny; to grow up. In *An Answer to the Question: What is Enlightenment?* (originally published in 1784), Immanuel Kant emphasised 'release from … self-incurred tutelage. Self-incurred is this tutelage when its cause lies not in lack of reason but in lack of resolution and courage to use it without direction from another' (1963, p. 3).

These are examples of great philosophers and scientists challenging established knowledge, such as religious dogma and ancient scientific assumptions. Most of us are not going to be the authors of world-changing theories, but the lesson from philosophy for most individuals concerns the attitude we take to our own lives and the issues that define them. At bottom this is the importance of *taking responsibility* for our beliefs; of thinking them through rigorously, testing them out where possible and taking 'ownership' of them. In this vein, the nineteenth-century philosopher Søren Kierkegaard observed in *The Present Age* (originally published in 1846):

> There are handbooks on everything, and generally speaking education will soon consist of knowing letter-perfect a larger or smaller compendium of observations from such handbooks, and one will excel in proportion to his skill in pulling out the particular one, just as the typesetter picks out letters.
>
> (1979, p. 104)

His complaint concerned how, in an age proud to define itself as progressive in terms of social and scientific advances, individuals come to see themselves as embodying this progress without themselves needing to put the work in; without, as Cardinal Newman put it in *The Idea of a University* ([1852] 1982, p. 101) 'making the objects of our knowledge subjectively our own'. This is a product of concentrated thought about aspects of our world, whether novel or taken for granted; and it is to understand the value of questions like: 'What exactly does this claim mean?', 'What can we infer from it?', 'How do I know it is the truth?', 'Why is it important to know about?', and 'What difference might knowing about it make to my life?' While critical thinking is not proposing the impossible task of understanding everything, it is proposing that there are dispositions or attitudes we can develop that make us less susceptible to error; that enable us to ask the right questions and, perhaps most importantly, to have a reflective awareness of what we, as individuals, do and do not know.

Features of what is now called 'critical thinking' are foundational to the mood and practice of modern philosophy, but the prototypical critical thinker is the ancient Athenian, Socrates (469–399 BCE). He did not write anything, but his ideas, personality and philosophical

approach, as presented in Plato's dialogues, are hugely influential. Socrates (like his pupil Plato, and Plato's pupil Aristotle) was concerned about the level of ignorance he encountered in those around him, including teachers and statesmen. More importantly, he was exercised by people's ignorance of their own ignorance. For example in the *Apology*, after engaging a politician with a reputation for wisdom in dialogue, he concludes:

> It is only too likely that neither of us has any knowledge to boast of; but he thinks he knows something that he does not know, whereas I am quite conscious of my ignorance ... I am wiser than he is to this small extent, that I do not think that I know what I do not know.
>
> (Plato, 1993, p. 42)

He then reports on talking with a poet and a craftsman, and in both cases finds that because they know about their particular art or skill, they then assume that they 'have a perfect understanding of every other subject' as well (ibid., p. 43). This is an unwarranted generalisation which implies a lack of appropriate humility, or at least self-knowledge.

For Socrates, this attitude was created and indulged by improper education; in particular, an over-emphasis on the practice of **rhetoric**. Through being effective in various forums (such as politics and law), rhetoric had tended to relegate and obscure both the nature and value of truth, and the frames of mind needed to attain it. Rhetoric (or oratory) in ancient Greece was the art of persuasive public speaking, and can be more broadly defined now as the art of persuasive communication. Socrates viewed it as the 'knack' of winning over uninformed audiences by 'pandering' to them; presenting versions of reality which are superficially pleasing at the cost of true understanding. In the *Gorgias*, he compared rhetoric to cookery, which

> puts on the mask of medicine and pretends to know what foods are best for the body, and, if a doctor or a cook had to compete before an audience of children ... with the job of deciding which of them is the better judge of wholesome and unwholesome foodstuffs, the doctor would unquestionably die of hunger.
>
> (Plato, 2004, p. 32)

In this analogy, the people of Athens are the children (a prelude to Kant's 'tutelage' metaphor), the orator is the confectioner and the philosopher is the doctor. The weakness in the comparison is that, unlike children, the people of Athens should know better; they are, to an extent, allowing themselves to be taken in by the more palatable illusions of the speech makers. Not least of these illusions is the belief that their opinions are the right ones, especially if supported by those who deliver a version of them with confidence and eloquence.

Attaining true wisdom (rather than the superficial appearance of it) requires the painful or disquieting knowledge of our ignorance and a commitment to 'examining life' that is hard, if ultimately rewarding. For Socrates, being able to think independently and competently is a fundamental component of living well and being happy, and he saw himself as a living reminder of this fact in Athens. Famously he gave the state little option but to kill him for his troubles, but in his own defence, he argued in the *Apology*, 'If you put me to death, you will not easily find anyone to take my place.' He depicted his city as

> a large thoroughbred horse which because of its great size is inclined to be lazy and needs the stimulation of some stinging fly; and all day long I never cease to settle here, there, and everywhere, rousing, persuading, reproving every one of you.
>
> (1998, p. 54)

We do not need to be agitators in this way to be critical thinkers, but the horse and fly metaphor can also represent our attitude to ourselves; *we need to be our own fly*. As we have seen, critical thinking is a form of 'rousing', helping to improve our error-prone habits of thought and action.

The method of the fly is **dialogue**: the exchange of views – of explanations and arguments – between two (or more) people. (For the sake of simplicity I will assume it to be a two-person discussion.) A lot will be said about the nature and importance of dialogues in Chapter 2, but aspects on its significance for Socrates will be briefly discussed here. A dialogue can be two people with opposing views trying to convince each other of the rightness of their particular view; or it can be one person attempting to persuade an uncommitted person. Socrates' dialogues usually take the latter form, with

him questioning someone who believes they know something with the aim of testing the firmness of the grounds of that belief. While Descartes in his *Meditations* engaged in a kind of internal dialogue to establish what he should and should not accept as true, Socrates' method was interpersonal.

Socrates also saw himself as a 'midwife', assisting the person, through philosophical discussion, to realise the status of their beliefs. The vital point of the midwifery metaphor is that the individual is not handed the truth (for example, as something to be learned by rote), but is encouraged to reason their way to it. Most of us will know from experience what this kind of clarity feels like; we, in a sense, remind ourselves of why we know what we know. Alternatively we discover that we do not know what we thought we knew, and through reasoning come to appreciate our ignorance. It must be said that reading many of Plato's dialogues can leave us with the impression that Socrates did not always help people achieve this, but the principle stands and remains basic to educational practices advocated by philosophy. Rather than passive absorption, dialogue is active, and rather than dependence on the wisdom of another, it emphasises independence of thought. As we have seen, these are basic to Dewey's definition of critical thinking.

There is an asymmetry in many of Socrates' dialogues – he the sceptical enquirer, the other person claiming to know something. Teachers and peers can play this role, but very often dialogues are symmetrical, with both parties having diverging convictions about the matter at hand. Under these conditions the risk is that competition and emotion interfere with truth-seeking. That aside, holding a constructive dialogue is not simply a matter of common sense. For these reasons, as we will see in the next section, strains of critical thinking have placed great emphasis on understanding and promoting the art of dialogue.

The spirit of philosophy, as exemplified by Socrates, can be summarised in terms of four archetypes:

- *The critical thinker*: questioning assumptions about the way the world is.
- *The seeker*: of ultimate truths (even if this is the realisation that there can be no such truths), and of happiness or an otherwise fulfilling life.