The Basis of Thinking
What is Yours?
By
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September 13, 2020

Several years ago, I was at a hobby farm that included a monkey in its menagerie. I was among a handful of other guests standing round its circular cage when I jangled my keys to rouse its attention. The monkey came to me, appeared transfixed, then, faster than a Shaolin priest, snatched the entire keyring from my hand. As if taunting me, it began biting the ring's pendant, then scraping it on the concrete as if to intentionally rough it up. Although the keys remained within my reach, it wouldn't have been safe attempting to retrieve them while the animal was still holding them. So a colleague on the other side of the large cage began flickering his lighter. The monkey immediately dropped my keys and went for the lighter. About halfway between the lighter and the keys, discerning my body language, it realized its error and froze for about two seconds of indecision as it prepared to reclaim its prize. I took advantage of its vacillation to leap for my keys before it could. Another second and I would have lost my advantage. Thankfully, I retrieved them without incident and still have the marred keyring as a reminder.

I begin with this anecdote on thinking, not to prove that I was able to outsmart a monkey, or else I would have been smart enough not to lose my keys to the simian savant in the first place. I want to point out, rather, that the monkey itself demonstrated an ability to think, which was apparent in its moment of indecision. I don't know what its internal processes were, or how it experienced its thoughts. Perhaps they were more like images or dueling emotions. The 17^{th} century rationalist philosopher, Baruch Spinoza defined an emotion as "a confused idea." If this is so, maybe all emotions are unformed thoughts, and, as such, a kind of rudimentary thinking. Whatever was going on inside its head, the monkey clearly had a moment of uncertainty in which it stopped to consider, in some way, how best to respond.

Pet owners often see the same kind of indecision expressed by cats and dogs, and just two days ago I saw it exhibited by a small group of turkeys grazing in my yard. Upon seeing me watching them through the window, they had to decide whether it was safe to resume eating or time to flee. After freezing to observe me for a few seconds, they decided it was safe enough to graze a bit longer, but still left sooner than was necessary, indicating they had made a compromise.

Reason has long been considered one, if not *the* defining quality of our species. But it seems fairly certain lots of other kinds of animals also think. The difference between them and us may only be that we are able to think in words. Language, in addition to images and emotions, means something to us. We are now discovering that lots of other animals also communicate through languages of their own, but human language is complex enough to be represented

in written symbols. We can write love letters, author bestselling novels, win Pulitzer prizes, and create scripts to program computers. No other animal so much as scratches a single symbol in the dirt. Words are how we share what's locked inside our heads: they're how we make public what must otherwise remain private. Not that we can be sure an individual's words ever fully express the private thoughts they are meant to describe, or are received by the hearer precisely as the speaker intends, but our understanding of language, so long as we share the same language, is presumed to be close enough to effectively communicate with one another.

So, without going further into what in philosophy is called "the private language argument," it is enough if we agree that *human beings communicate their private thoughts through symbolic language in a way that is unique compared to all other known creatures.* This ability to reason with one another seems so apparent that since its very inception more than 2,500 years ago, Western philosophy has considered it one of the two defining qualities of human nature, alongside our need to socialize.

All of this is a rather long route just to say, "humans think." I could have just begun by saying, "humans think." But this is more about getting us to think about thinking, rather than thoughtlessly accepting what seems self-evident to us. I have already said enough to raise questions about the quality of our thinking, about the adequacy of language for truly conveying our thoughts, about nonverbal forms of thinking involving images and emotions that we, like other animals, also engage in, and whether thinking in words is necessarily superior to other ways of thinking. So we have already been thinking critically about thinking, which is the purpose of this *Perennial Problems* series of sermons.

The basis of thinking: What is yours? Whether we are communicating with others or having an internal conversation with words, with tend to think without much thought. And because the kind of thinking we are most aware of comes wrapped in narrative, we are inclined to believe we are always thinking in a way that is perfectly reasonable. But there are some things that come natural to us and some that require discipline, intention, and study. Fashioning instruments and making music is an entirely human phenomenon, but not all humans are musical. Becoming a musician takes effort and practice. In the same way, thinking in words is an entirely human phenomenon, as far as we know, but it takes effort and practice to reason well. Just because we think in words does not mean we are thinking reasonably.

Logic, which I use interchangeably with reasoning well, is a discipline that was first developed by Aristotle 2,500 years ago. To practice it, one must learn its proper figures, moods, forms, rules, and fallacies. Even then, it would take an extraordinary mind to be able to instantly translate the informal arguments we encounter in most communications into formal arguments then to analyze their soundness, let alone managing to do so while remaining fully engaged in a conversation. Just to translate an informal argument into a

formal argument for analysis, one must first eliminate synonyms to create the proper number of terms, two terms for hypothetical arguments, and three terms for categorical arguments, then, for the latter, use *conversion*, *obversion*, or *contraposition* to further eliminate class compliments.

If you understand what I just said, congratulations, but I wouldn't expect you to. I only mean to make the point that logic, though an important discipline to practice when it comes to thinking thoughtfully, is impractical in most circumstances, including for logicians who don't have the unusual kind of brain anomalies that enabled Albert Einstein to think more abstractly than most of us. When, in my bestselling book, *The Gadfly Papers*, I use formal logic to analyze the soundness of Robin DiAngelo's "white fragility" hypotheses, as outline in her original 2011 article on the topic, I first break the entire article down to its "approximately 175 (compound) propositional statements asserting something is true," that are "included in 25 paragraphs." One colleague, who I consider a much better logician than me, sent me an email thanking me for what he said "must have been a painstaking process," which he would not have had the patience for. For most of us, formal logic takes time and effort, which is why I say it is as impractical a discipline as it is inaccessible.

It should also be understood that logic does not indicate whether or not an argument is true, only that it is either sound or unsound. I'm not sure it's still true today but when I was in grade school we were not allowed to bring calculators to class and had to show all our work when solving math problems. It wasn't enough just to give the correct answers: our teachers wanted us to prove we truly understood how to solve the problems.

Logic is the same. All of us go about hearing and making assertions of truth. That is, we says things we think are true, and hear things others think are true. Such statements, however, are not logical inasmuch as they are not part of an argument. They are just lonely assertions of truth, just as the answer to a math problem unaccompanied by its work is just a number. Logic includes an assertion of truth, but also the work getting to it, the reasons *why* it is said to be true. If such an argument is in proper form, we can analyze the form as easily as we can a math problem to see if it's sound. A sound argument, one that has proper form, regardless of the terms it uses, means that if its premises are true, its conclusion must also be true. As with math, resolving a problem in the right way means our answer must be correct.

But truth is an epistemological problem, not a logical one. In logic, *if our premises are true, the conclusion must be true*, is a big "if!" For nothing has been proven to be known with absolute certainty. Logic is about thinking well, not for ascertaining truth. Although, I think it's fair to say that by determining the logical soundness of our thinking, we can feel more secure about the reliability of our conclusions, and the things we guess might be true. As I often say, *always base your next leap of faith on your best educated guess*. Logic can help us make good guesses.

As a practicing philosopher, which means someone who tries to make philosophy practical, I have long believed we could resolve most the world's greatest problems in a generation if we begin teaching kids critical thinking today. *Critical thinking*, which I also consider synonymous with logic, requires us to question our own beliefs as wells as those others ask us to believe. We accomplish this by considering the reasons *why* something is said to be true. An assertion of truth accompanied by reasons explaining *why* it should be considered true is part of an argument and can thus be logically analyzed. But we still have the problems of accessibility and practicality. Even if formal logic were suddenly a required part of every person's education, it would still be impractical in most situations. Who has time to take every conversation, article, report, or book, and break them down into their number of propositional statements to properly analyze their form? Nobody, not even Einstein, to my knowledge, did or does that.

Realizing this, I've had to ask myself *why* I've been such a vocal proponent of logic ever since studying it in college 35 years ago? If logic is so impractical most of the time, what good is it and how could teaching it solve any, let alone, most the world's problems? Upon considering these questions, I realized it's because learning formal logic has allowed me to distill enough of it down to be immediately accessible and of practical use most of the time. Understanding formal logic, with all its proper forms, figures, moods, rules, and fallacies, has enabled me to grasp it's fundamental principles, which are easy to remember and simple to use.

In recent years, I've come to call this the Kerdcera logic method, which has been developed at this church in the Kerdcera Dojo, a group that has been meeting regularly on Tuesday nights going on four years. *Kerdcera* is the hybridization of two ancient proto-Indo-European words that mean "heart" and "head," because this is what we practice at the dojo, logic and emotional intelligence, the *Art of Being Thoughtful*. Like Spinoza, we operate on the functional premise that thoughts and feelings occur as one event, that thoughts cause emotions, and emotions are expressed through ideas. Ask somebody what they are feeling in this moment, and it is difficult for them to know until they start talking, expressing in words, not the particular emotion, but why they are feeling it, the idea behind it. Likewise, as we begin to consider an assertion of truth, we find our emotions shift faster than a monkey snatches keys, simply by an idea entering into our ideological environment, our noosphere.

From this we can infer the following: That emotions impact thoughts and thoughts impact emotions. Emotions contain "biological signatures," meaning they express themselves not only privately, but physically by altering things like posture, facial expression, blood pressure, breath, vocalization, and so forth. This is why it is often possible to understand what someone is feeling just by looking at them. Laughing and crying are obvious examples of how emotions manifest physically and involuntarily. In the Kerdcera Dojo, we have also discovered that emotions have an *ideological* signature. We express our emotions, that is, as ideas. Ask someone how they feel about something and they will most like tell you what they

think about it, never mentioning their emotions, but with explanations often accompanied by varying degrees of emotional affect that tell us precisely how they feel.

We've also discovered how quickly our emotions change, often in extremes, simply in response to the sudden entry of an idea. We do an emotional check in at the start of each meeting, during which participants usually express ideas more than feelings. It often appears that we don't know what we're feeling until an idea comes to us that can explain it even to ourselves. A few minutes later, when we go to consider the soundness of a particular argument, perhaps presented in an editorial, on the news, or in a letter to the editor, our emotions have completely shifted to another state. Even though we may be considering a matter we otherwise wouldn't have even thought about, we can become so emotionally invested in it that it becomes nearly impossible to remain objective and follow our logical technique, which is what we're there for, not to debate the issue at hand.

And this is another point I think is crucial to understand: we tend to think based upon our emotional biases rather than objective data. But because we experience our emotions as thoughts, by explaining them in narrative, justifying them ideologically, if you will, we think we are being perfectly reasonable when we are not. This works if you prefer living in a matrix of your own unproven ideas about the world, rather than in the world on its own terms, but if you wish to be in integrity with yourself, to live an examined life, a life worth living, it is necessary to disentangle what we will to be true from what is really true.

To help, here is the four-step approach we call the Kerdcera logic technique:

First, *Own Your biases*. This is not only the first, but also the hardest step because our unconscious emotional response to an assertion of truth can be so immediate and so intense that we want to rush to affirm or deny it without thinking. But logic is meant to help us get past our ideological and emotional biases by considering matters objectively. It's a twofold step inasmuch as it requires us to name both our emotional and ideological biases. This can be expressed pretty simply as, "I'm delighted with the idea and couldn't agree more," or, "It makes me angry as hell and I completely disagree." In honesty, most the time our participants launch right into why they think is wrong or right without really acknowledging their biases. It seems so simple, but, again, in this case the first step really is the hardest. But just imagine what our society might be like if most people acknowledged their ideas are based on biases that remain questionable no matter how much we like them. I imagine there would be a lot less strife in the world.

The second step is to ask, *What's the what?* In logic, what we call the *What* is an argument's conclusion. We phrase the question this way to help us quickly ascertain the main point we're being asked to accept is true. You may read an opinion in the paper that's several paragraphs long, most of which his trying to get you to agree with its main point. So figure

out in a few words what the main point is. What precisely are you being asked to believe is true?

The third step is to ask, What's the why? In logic, the why is referred to as an argument's premises, the reasons its conclusion is said to be true. If somebody asserts something is true without giving reasons, without explaining why it should be considered true, then there is no argument being made and no way to logically evaluate it. If a series of statements, like an article, consist entirely of unfounded assertions of truth, none of which lead to the others, we just have a list of opinions, not an argument. The President is an idiot. Global warming is real. There is smoke in the air, are a list of assertions, but not part of an argument. Whereas The President doesn't believe in Global Warming. All the smoke in the air today is Global Warming. Therefore, the President doesn't believe in all the smoke in the air today, is an argument, and a logically valid one at that.

The fourth and final step is to ask, *Does the What follow from the Why*? In other words, do the reasons given in support of the main point actually support it? If the argument were to go, *The President doesn't accept Global warming because his constituents don't want him to, therefore, Global Warming is a hoax*, it should be obvious that not wishing something to be true doesn't make it a hoax. On the other hand, *An unprecedented number of wildfires means Global Warming is happening. There is an unprecedented number of wildfires. Global Warming is happening*, is reasonable because the premises support the conclusion, the *What follows from the Why*. Those steps again, in case you want to write them down, are: Own your own biases. Then ask, What's the What? What's the Why? Does the What follow from the Why?

All of us think thoughts, and most assume we think well, and many that our thoughts are perfectly reasonable. Yet how many of us have been taught *how* to think well or ever considered the basis of our own thinking? Living the good life, the life worth living, requires us to examine our own thinking: but be forewarned, the powers-that-be and the *status quo* dread reason. Being thoughtful doesn't always win friends and influence people. It can make life difficult, but living an examined life is well worth it in my opinion. The ancient Stoics, who believed pain and pleasure are indifferent when it comes to living our values, also believed we, like all animals, should live according to our nature, and that human nature is to be social and to reason. As the philosopher Maximo Pigliucci says, the Stoics believed "that the point of life for human beings is to use reason to build the best society that is humanly possible to build." Likewise, Aristotle considered reason humanity's *ergon*, meaning our work or function, and doing it well is what makes us "excellent." Think about it.

¹ Grayling, A.C., The History of Philosophy, Penguin Press, New York, NY, 2019, p. 215

² Eklof, Todd, *The Gadfly Papers*, 2019, p. 116.

³ Pigliucci, Maximo, *How to be a Stoic*, Basic Books, New York, NY, 2017, p. 48.

⁴ Grayling, A.C., ibid., p. 92.