The Art of Thinking: How to Think, not What to Think

1. Why Thinking Matters

Each human being owns himself in the sense that he does not belong to anyone else. Since no human being belongs to any other human being, the activities in which people cooperate must be consensual. Of course, in order to give consent to interact with another person or group of people, one must understand what it is he agrees to. This requires at a minimum that we each are able to think and speak for ourselves, and we recognize the obligation to speak honestly with others. We each have the right to think and to speak for ourselves: each man and woman owns his own thoughts, and has the right to speak them. Of course, we will disagree with one another, and here we find the ground for the importance of listening as well as speaking with each other, that is, conversation, which is always the product of thinking. We read in Aristotle the observation that whatever human beings do can be done well or badly. Thinking is the pre-eminently human ability having clearly identifiable principles, and practices…and it can be done well or badly. This course is an exercise in learning to think well, and in doing so, to take steps toward recovering a society that is good for the people living in it, and a home fit for the human soul.

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Between 1720 and 1723, John Trenchard and Thomas Gordon published a series of 144 essays in the *London Journal* in opposition to the corruption of British corporations and the British government. Trenchard and Gordon wrote under the pen name “Cato,” for the Roman statesman who defied Julius Caesar. Letter 15, written by Gordon, begins this way.

Sir: Without freedom of thought, there can be no such thing as wisdom; and no such thing as publick liberty, without freedom of speech: Which is the right of every man, as far as by it he

does not hurt and control the right of another; and this is the only check which it ought to suffer, the only bounds which it ought to know.

This sacred privilege is so essential to free government, that the security of property; and the freedom of speech, always go together; and in those wretched countries where a man can not call his tongue his own, he can scarce call any thing else his own. Whoever would overthrow the liberty of the nation, must begin by subduing the freedom of speech;…

In order to overthrow the liberty of a people, tyrants must subdue their freedom of speech. A cultural tradition, as the great Irish Parliamentarian Edmund Burke observed in the 18th century, is more a bond of sprit than matter, and a tradition takes a long time to develop. This is why a cultural tradition is a bond of the living, the dead, and those yet to be born.

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The life's blood of a cultural tradition is conversation, and this is why Thomas Gordon argues so carefully for the importance of freedom of thought and freedom of speech. In conversation, people are able to consider what is good and true, and importantly, it is in conversation that people are able to consider incoherences that are latent in every cultural tradition. By thinking carefully through anomalous elements in a tradition, its members can correct them and improve the tradition. When you find a broken pipe in your house, you repair it, you don't burn down the house. Likewise, when a people find something incoherent, even immoral, in their tradition, they fix it rather than burn down the society, for this will harm everyone, while repairing the cultural incoherence will benefit everyone.

This is true also of family relationships in general, in friendships, in business relationships, and certainly in religious associations. We work through conflicts and disagreements with careful reflection through conversation. Such a society, with a living cultural tradition, may be called a society of "social-bond individualism," in which the natural liberty of each person finds its proper field of operation and development in the social bonds of family, friendships, and civil associations that constitute the natural habitat of the human person. In this we can see what

Edmund Burke had in mind when he said that a cultural tradition is more a spiritual bond than a material one. This healthy social-bond individualism is the heart of a free, self-governing society, and it depends for its existence on conversation which is the fruit of the art of thinking.

2. Thinking and Worldview

At the beginning, we should become clear on an important distinction, and this is the distinction between the methods and rules of thinking on one hand, and on the other hand one's worldview. All thinking begins from fundamental principles that we reason *from,* but rarely *to.* It works like this. The mind can think theoretically, or speculatively, and when it does this, it proceeds from the principle that two halves of a contradiction cannot be true at the same time. For example, it cannot be true that there is a God, and there is no God because if there is a God, then the claim that there is no God must be false. When thinking through a question, if one encounters a contradiction, a mistake has been made. The mind can also think in a practical way, concerning what we do and how we think about what we do. When the mind thinks in a practical way, it proceeds from the principle that good should be done and pursued, and evil avoided. This course is about thinking in this practical way.

When someone looks at the world outside of himself, he does so according to certain convictions he has about the world outside of himself. These convictions vary from person to person, but we all have them. Some people believe in God, some don't, some claim they don't care, some believe the family is the cornerstone of society, some don't, some believe all people are equal, whatever that may mean, others do not think this. Here's a comparison of two very different worldviews: one we'll call traditional and the other we'll call modern.

Traditional Worldview	**Modern Worldview**
1. There is a God who created the universe	1. There is no God

2. The universe has a beginning	2. Matter has always existed
3. There is inherent meaning in being	3. All is random, no meaning
4. Morality is discovered	4. Morality is invented
5. Knowledge can be obtained by revelation	5. No revelation

This is the point: We sometimes encounter facts or arguments that we are inclined to reject, not because they are wrong but because they make us uncomfortable or even angry. This is usually because our worldview is being challenged and it doesn't feel good. But one important benefit that comes from clear and skillful thinking is that we can reflect on our most intimate beliefs and consider how worthy of belief they actually are. It is important to bear this in mind as we proceed.

3. Classical Principles of Thought

When thinking about how to act and about the circumstances in which we are acting we are to be guided by what is often called the First Principle of Practical Reason: Good should be done and pursued and evil avoided. But this principle is a guide that keeps us from wandering into paths of conduct that are unhelpful or unhealthy, and this principle is made sharper and stronger by the classical principles of thought. There are three. The first is the **principle of identity**, which rests on the understanding that everything that exists is something in particular. The importance of this

observation cannot be overstated. In fact, if it is not true that everything that exists is something in particular, science is impossible, as is thought in general. Scientists study a thing in order to understand its nature, but if that nature is constantly changing, no understanding can be achieved. This principle says simply that a thing is identical with itself. However, the implication of this is that a thing is not what it is not. A man is a man, and this means, by the principle of identity, that a man is not a stone or a cat or a woman. If a man *thinks* he is a stone or a cat or a woman, or *feels* he is a stone or a cat or a woman, he is simply wrong. The second classical principle is the **principle of the excluded middle**. This principle says that for every claim, either it is true or its contrary is true. Another way to say this is that a claim is either true or it isn't. For example, either restricting people's right to free speech is morally permissible or it isn't. Those who say it is a matter of opinion or of personal style are wrong because this assumes that the claim "restricting speech is wrong" is neither true nor false, when in fact, by the principle of the excluded middle, the claim is either true or it isn't. The third classical principle of thought is the **principle of non-contradiction.** This principle, which is also the First Principle of Theoretical Reason, says that two halves of a contradiction cannot be true at the same time. We've met this principle already. If three people are talking and one says there is a God who made us, and another says there is no God, and a third says that both of the first two are right, we know for sure that the third person is wrong because he is attempting to hold together both halves of a contradiction.

4. Propositions (General and Universal) and Arguments

Propositions

Arguments are built on propositions (which in the previous section we called "claims"). A proposition is a statement that can be either true or false. "Today is Monday," and "Alcohol evaporates faster than water" are propositions because they can be either true or false. "Shut the door" is not a proposition but a command. It can neither be true nor false. "What time is it?" is a question and not a proposition. To be a proposition, it must be capable of being either true or false. (General and universal)

Arguments

An argument as we use the term in practical thinking is a reason or an arrangement of reasons aimed at demonstrating that an action or an idea or another argument is either right or wrong. We will examine the differences between deductive and inductive argument and note that they are built on premises and the conclusions logically drawn from them. A premise in an argument is a proposition that serves to support the conclusion, and a conclusion is a proposition that logically follows from the premises. It is important always to bear in mind that whenever we undertake to argue or to explain, **we can be either right or wrong.** If you hold a view of something, and someone explains to you through an argument that that view is incorrect (assuming you aren't thwarted by your worldview), then he has done you a favor. This is so because as vitamins and proteins are nourishment to the body, truth is the nourishment of the mind. Thus thinking should place us accurately in touch with the world outside of our minds.

Deductive Argument

Deductive arguments, sometimes called the "standard form," are structured such that if the premises are true, and the conclusion contains no information not in the premises, then the conclusion has to be true. This kind of argument Aristotle called a syllogism. The Stanford Encyclopedia of Philosophy's entry on "Aristotle's Logic" describes it this way: "X results of necessity from Y and Z if it were impossible for X to be false if Y and Z were true." Consider the following example.

Y. All apples are fruits.

Z. A McIntosh is an apple.

X. A McIntosh is a fruit.

In this example, Y and Z are related to each other in such a way that if they are true, X cannot be false. This is so because Y and Z are true, and there is no information in X that is not in Y or Z. Let's change the argument a bit and see what effect it has.

Y. All apples are fruits.

Z. A McIntosh is an apple.

X. A McIntosh will make a fine pie.

It is clear in this example that the conclusion contains information that is not found in the premises. For this reason, we say this argument is **invalid.** "Validity" as used in practical reason describes an argument that is structured in such a way that if the premises are true, the conclusion has to be true. Note that the conclusion in our second example *might* be true, but we cannot say we know this on the basis of our invalid argument. Consider the next example, and with this example, we will use the usual practice of numbering the premises.

1. All oranges are fruit.
2. A McIntosh is an orange.
3. Therefore, a McIntosh is a fruit.

The second premise of this argument is false, and yet the conclusion is true. What this tells us is that when arguing, when thinking carefully about anything, the argument is not just the content of what we are saying, it is also the argumentative *structure* in which we frame it. True claims can be set in an argument that has an unreliable structure, and the flawed structure does not prove the conclusion false, but it does mean we can have no confidence in the conclusion. An argument is **sound** when it is both valid and true, as is the case with our first example.

Inductive Argument

Inductive arguments differ from deductive arguments in that the premises of inductive arguments do not *prove* the conclusion, but rather give us good reasons for thinking the conclusion is true. In other words, the premises in an inductive argument, if true, make it unlikely that the conclusion is false. Inductive reasoning is a primary tool of scientific exploration in that it looks at evidence and frames it as a proposition, then draws the most likely conclusion. Here's a simple example.

Premise: Every dog that has ever died has stayed that way.

Conclusion: My dead dog Mortimer won't be back.

Note that the premise does not prove the conclusion, but strongly suggests it. The premise doesn't prove the conclusion here because there is no logical reason that a dead dog won't resuscitate (David Hume). Let's look at a more complex example taken from a story of Sherlock Holmes. In "A Study in Scarlet," readers are introduced to Dr. Watson where he meets Sherlock

Holmes for the first time in London. When they meet, Holmes tells Watson that he believes him to be an army doctor just back home from Afghanistan. In the discussion that follows, Holmes explains how he came to this conclusion.

“Here is a gentleman of the medical type, but with the air of a military man. Clearly an army doctor, then. He has just come from the tropics, for his face is dark, and that is not the natural tint of his skin, for his wrists are fair. He has undergone hardship and sickness, as his haggard face says clearly. His left arm has been injured: He holds it in a stiff and unnatural manner. Where in the tropics could an English army doctor have seen much hardship and got his arm wounded? Clearly in Afghanistan.”

The observations and conclusions here are not framed in standard form because the arguments are not deductive, drawing conclusions from the literal meaning of the premises, but we shall list them in turn.

First, Holmes notes that the man he is describing is a medical type with military bearing, and concludes that he is an army doctor.

Second, he has probably recently returned from the tropics because the skin on his face is darker than the skin on his wrists, suggesting exposure to sunlight.

Third, the doctor has gone through sickness and hardship, as we might judge from the haggard look of his face.

Fourth, the man holds his arm in a stiff and unnatural way, indicating that he has been wounded or injured in some other way.

Finally, Holmes wonders where in the tropics an English army doctor would experience hardship and injury and concludes it must be Afghanistan.

You see that for each of his observations, the conclusions drawn by Holmes are likely to be true, but their truth is not proven as they are in deductive arguments. So in an inductive argument, we do not seek to make an argument that is sound, that is, structured in such a way that if the premises are true, the conclusion has to be true, and also true, but rather we seek arguments in which the logical relationship between premise and conclusion is **strong.**

We have seen what are deductive and inductive arguments, and what makes them valid (deduction) or strong (induction) or invalid or weak. We will next examine what are called fallacies of reason. We will consider those errors of thinking that we see around us most often. In practical reason, we need to be able to make well-formed arguments, but we need also to be able to spot bad arguments.

5. Fallacies of Reason

Fallacies are mistakes in thinking that are possible, and surprisingly common. Here are some of the more common mistakes.

1. *Argumentum Ad Hominem,* or argument against the man: This is the error of responding to an argument with an attack on the arguer. The problem with doing this, aside from bad manners, is that arguments stand or fall on their own merit, not on the character of the arguer. Thus if Adolph Hitler tells us to love our mothers and care for them in their old age, we don't go home and abuse our mothers so we won't be like Hitler. Even hateful people can make correct arguments, and so we attack arguments, not arguers. The ad hominem fallacy takes a few forms including the simple, crude abuse of someone by calling him a racist, bigot, Nazi, or whatever form of abuse is currently fashionable, and we have seen that bad people can make correct arguments, so the abuse is crude and irrelevant. Another form of the fallacy is to ascribe a motive to someone as if the ascription of motive, which the abuser cannot know to be true, falsifies the argument. For example, a fellow says that he opposes affirmative action policies because they are the products of government discrimination on the basis of race. The abuser responds by saying that the arguer doesn't want to see poor people get ahead. Well, it might be true that the arguer cares nothing for the poor, but that sentiment, whatever we might think about it, is irrelevant to the truth-value of his argument. It may be true that the arguer is insensitive to the struggles of the poor, and true that affirmative action policies are government discrimination on the basis of race, so the ascription of motive is pointless, functioning only to stop conversation, not advance it.

2. *False Dilemma*: This fallacy is called also the false dichotomy, bifurcation fallacy, and either/or fallacy. It is committed when someone insists that our situation has only two options, when in fact there are more than two. Bear in mind, sometimes there are only two options, for example, either there is a God or there isn't. But if we say that we either raise taxes on the rich or the poor will starve, this is a false dilemma, since there are ways to feed hungry people without taxing anyone.

3. *Straw Man Fallacy:* A straw man argument is often used to divert attention from an argument one cannot easily defeat and replace it with a different argument that is easier to rebut. A fellow makes an argument for eating less fatty meat, extolling the health benefits. His conversation partner says he's really a vegan and wants people to stop eating meat altogether and how bad this would be for farmers, and so on. While there are people who claim we should not eat meat, our fellow did not say that, and so the rebuttal is against an argument that wasn't made, or, a straw man.

4. *Argument from Ignorance:* This argument is found rather often and its error lies in this: from an observation of ignorance, nothing follows. It is a mistake, therefore, to conclude from the observation that we have no evidence that Senator Smith has an illegitimate child, that therefore he does (or doesn't). We do not have enough evidence for a conclusion. This is the key: from an observation of ignorance, let us call it a lack of evidence, nothing follows.

5. *Slippery Slope:* This error is usually easy to spot because it is so obvious. It begins with an observation of no particular urgency and ends in turmoil and struggle. For example, a young fellow is confronted by his mother for failing to do his homework. The boy tells his mother that it's a simple assignment that doesn't mean anything. The mother objects, saying to her son that if he doesn't do his homework, we will fail in school. If he fails in school, he won't get a good job.

If he doesn't get a good job, he won't be able to support a family, in which case he'll spend his life alone and broke. So, do your homework.

6. *Special Pleading:* This fallacy occurs when people seek to exempt themselves from rules they wish to apply to everyone else. Someone asserts, for example that no one is above the law, but then claims that senior elected officials should not be held to account for minor crimes because they are so important to society. Or consider the student who is caught cheating on a test and says that he knows that cheating should be punished, but he just made a stupid mistake.

7. *Genetic Fallacy:* This error is quite popular. Its fallacy consists in its irrelevance to the subject under discussion, and takes the form of denying the legitimacy of an idea or practice on grounds of its origins. For example, A says to B that he and his wife recently crossed the Atlantic to Europe in a ship of the Steerage Line. B then upbraids A for travelling on a ship line that has a murky past doing some really shady things during World War I. This kind of claim ignores the present context, seeking to attach to something or someone in the present an unsavory element from the past that may no longer be relevant because both individual people and whole societies can improve over time.

8. *Post Hoc Ergo Propter Hoc:* All of the fallacies we've examined have Latin names, but this one pushes itself on you. It means "After this, therefore because of this," which is more tedious than the Latin name. The error consists in thinking that because B followed A, that A must have caused B. This may be true, but the observation alone proves nothing. If the cat climbs the curtains after a hearse drives by the house, it does not logically follow that the hearse caused the cat to climb the curtains. Here's a more timely example. If someone criticizes a politician for dishonesty, and later someone else attacks the politician, it does not follow logically that the criticism incited the attack.

9. *Ad Populum:* The error here is actually very easy to see. It consists in thinking that a claim is true because so many people believe it. After all, how can so many people be wrong? Plato's Socrates famously observed that truth is not determined by popular opinion, so if most people believe that storms at sea are caused by the god Neptune, this does not prove that Neptune causes storms.

10. *Complex Question:* This common error is committed when someone frames an accusation as a question. Here's the standard example. Note that in this fallacy, any attempt to answer the question will require either admitting to, or defending oneself against, an accusation. "Mr. Smith, when did you stop beating your wife?" Or again, "Mr. Smith, did your company profit from the pollution you caused?"

It should be clear that questions and accusations are different things, and so should be kept separate. But we should be clear also that however skillful one might become at the art of thinking, it does society in general no good unless the skill is possessed by people who are determined to communicate with others honestly, and to listen to others in order to understand them. Happily, when this disciplined is undertaken, one comes fully to enjoy conversation, which is one of the most important pleasures of life.