Rules of Argumentation

by Gary Curtis

Rules of Argumentation:

Introduction

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November 18th, 2018

> You got to accentuate the positive
> Eliminate the negative
> Latch on to the affirmative
> Don't mess with Mister In-between[1]

This entry is an introduction to a series of entries offering a first draft of a set of positive rules for reasoning. Starting next month, I plan to present a new rule each month until the set either seems to be logically complete or I run out of ideas. At this point, I don't know exactly how many rules there will be though I expect, for reasons explained below, that more than a dozen will be necessary.[2]

Is there a set of positive rules that would cover the same logical territory as the fallacies such that, if you obeyed all of these rules, you would thereby avoid committing any of the fallacies? If you think of a logical fallacy as a "Thou Shalt Not…" commandment, then of course one can have a set of positive rules simply by negating the commandments. For instance, Red Herring is the most general fallacy of irrelevance which, if expressed as a rule would be: Don't be irrelevant! You can turn

this negative rule into a positive one: Be relevant! You could do the same thing with all of the other logical fallacies.

Unfortunately, a set of positive rules corresponding one-to-one to the entire taxonomy of fallacies would be too large to be useful[3]. What seems to be needed is a smaller set of rules that would cover most, if not all, of the fallacies. There are already at least two such sets of rules, so that it isn't necessary to start from scratch:

1. **The Pragma-Dialectical Approach (P-DA):**This grandly-named research program was initiated by Frans van Eemeren and Rob Grootendorst[4]. The centerpiece of the P-DA is a set of "Ten Commandments for Critical Discussants"[5], which seems to have been intentionally devised to cover all of the traditional formal and informal logical fallacies.

   The P-DA rules cover the logical territory. The main problem with them is that many are so broad and general that they're not much practical help in improving your reasoning or critiquing that of others. For instance, the fourth commandment is in part: "Standpoints may not be defended by… argumentation that is not relevant to the standpoint."[6] In other words, like the hypothetical Red Herring rule mentioned above: Be relevant! But what's relevant? Most arguers who violate the rule think that they *are* being relevant. So, it's correct but useless as advice.

2. **Damer's Rules:** T. Edward Damer, in his textbook *Attacking Faulty Reasoning*[7], provides a set of a dozen rules that he calls "A code of conduct for effective rational discussion"[8]. There is much overlap between Damer's and the P-DA rules; for instance, Damer's sixth rule, "The Relevance Principle" states: "One who presents an argument for or attacks a position should set forth only reasons or questions that are directly related to the merit of the position at issue."[9] In other words, it's our old friend "Be relevant!" again.

To be of practical value to the reasoner, what seems to be needed is a set of rules that would cover all or at least most of the logical territory, but would be more specific than the highly general P-DA or Damer rules. However, it wouldn't be helpful to drill all the way down to the leaf nodes in the Taxonomy, because that's too specific and would produce too many rules. So, somewhere in between the overly-general P-DA/Damer rules and the overly-specific leaves of the Taxonomy would be more helpful to those trying to improve their own reasoning or that of others. That's what I'm going to attempt to do with this series of entries. Stay tuned!

Notes:

1. Harold Arlen, "Accentuate the Positive".

2. Thanks to Kelly Patrick Gerling for asking about a taxonomy of positive rules.
3. Of course, you can say the same thing about the taxonomy itself, namely, that there are too many fallacies. However, I didn't come up with most of them, I just taxonomized them, so don't blame me!
4. See: Frans H. Van Eemeren & Rob Grootendorst, *A Systematic Theory of Argumentation: The Pragma-dialectical Approach* (E&G 1). For a shorter presentation, see the same authors': "The Pragma-Dialectical Approach to Fallacies" (E&G 2), from *Fallacies: Classical and Contemporary Readings*, edited by Hans V. Hansen & Robert C. Pinto (1995), pp. 130-144.
5. E&G 1, pp. 190-196.
6. E&G 1, p. 192.
7. T. Edward Damer, *Attacking Faulty Reasoning: A Practical Guide to Fallacy-Free Arguments* (Third Edition, 1995).
8. Damer, Chapter 8.
9. Damer, p. 179.

Rule of Argumentation 1:
Appeal to Reason!

https://fallacyfiles.org/archive122018.html#12142018

December 14th, 2018

Reason's victories are almost never final. It is always surrounded by unreason, which is always more popular. Reason is the stout resistance, the flickering lamp in the darkness, the perpetual underdog, the stoic connoisseur of defeat, the loser that dusts itself off and fights another day.[1]

This is the first entry on the first rule in the series on rules of argumentation introduced last month[2]. The rule is simple: treat those you argue with as rational human beings by appealing to their reason. To do otherwise is to treat people as "its", as things, rather than as fellow rational beings. You might wonder what else you might appeal to and the answers are many:

- **Faith:** What is faith? It's hard to define, but one thing is clear: it's not reason. To appeal to faith is to attempt to get someone to believe something on a non-rational basis.

  If you have faith and believe in something because of it, good for you. However, you cannot expect others to share your faith. If they do so, then you don't need to convince them to believe what you believe. However, if they don't, then you will have to appeal to something other than faith to convince them. Historically, when appeals to faith have failed, the back-up has been the appeal to force[3]. Try reason, instead.

- **Authority[4]:** Some appeals to authority, especially appeals to religious authorities, try to get us to believe something because a holy book or a holy man says so. If what the book or the man says appeals to reason in its own right, then all's well; but if it doesn't make sense, then neither does the book or the man.

  Clearly, there's an overlap between appeals to faith and appeals to religious authority. Often we are asked to have faith in the authority of a religious text or a prophet, and to believe what the text or prophet says simply because they say it. But both books and men can be, and often are, wrong.

- **Emotion[5]:** Feelings such as fear, anger, hatred, even love can be used to bypass or overwhelm reason. We've all had the experience of getting angry, or falling in love, and doing or saying things that we later realize were irrational.

It isn't always wrong to use emotional appeals in argumentation, but to appeal to emotion instead of reason, or to arouse emotions in such a way as to overcome reason, is to treat people as purely emotional, rather than as partly rational, beings.

- **Force**[6]**:** That is, violence or the threat of it. If the way you deal with those who disagree with you is to kill them, assault them, or threaten to do so to gain compliance, then you are not dealing with them as reasonable beings. Instead, you are treating them like non-rational animals that must be whipped to get them to do what you want, or killed to get them out of your way.

  This is not to say that it is always logically wrong to use violence in dealing with other people. If others initiate violence or use the threat of it to coerce you, then you may have no alternative but to defend yourself. If others refuse to treat *you* as a rational being, then you may be justified in responding in kind.

  Obviously, there is an overlap between the preceding two types of non-rational appeal, since violence is frightening. Threats of violence are both appeals to force and to fear.

Using reason is risky: there's no guarantee it will work. When you appeal to reason, some will come back at you with appeals to faith, authority, or emotion. When those fail to work, they may appeal to force. Be brave! To quote the philosopher Immanuel Kant: "Sapere aude!"[7]

Next month: Rule 2.

Notes:

1. Leon Wieseltier, "Reason and the Republic of Opinion", *The New Republic*, 11/11/2014.
2. See: Rules of Argumentation: Introduction, 11/18/2018.
3. See below.
4. The most general related fallacy is: Appeal to Misleading Authority.
5. The most general related fallacy is: Emotional Appeal. There is a named subfallacy for most emotions.
6. The related fallacy is: Appeal to Force.
7. Translation: "Dare to use your reason!" (Latin). See: Immanuel Kant, "What is Enlightenment?", accessed: 12/13/2018. "Sapere aude!" is sometimes translated as "Dare to know!", which doesn't make much sense and apparently isn't an accurate translation. "Sapere" seems to mean something closer to "think" than to "know". Ehrlich gives "dare to think independently" as a translation. See:

- Eugene Ehrlich, *Veni, Vidi, Vici: Conquer Your Enemies, Impress Your Friends with Everyday Latin* (2001).
- Thomas Mautner, Editor, *A Dictionary of Philosophy* (1996).

Rule of Argumentation 2[1]:
Be Ready to Be Wrong!

https://fallacyfiles.org/archive012019.html#01262019

January 26th, 2019

> I beseech you, in the bowels of Christ,
> think it possible you may be mistaken.[2]

Speaking of being wrong, as I admitted to in the previous entry, the next time you find yourself in an argument, be prepared to admit your mistakes. Put yourself in the place of those you argue with for a moment: how would you feel if they simply couldn't be convinced to change their minds under any circumstances? I refuse to argue with people like that.

It's perhaps an unfortunate, but unavoidable, fact that we talk about argumentation as a form of conflict. In fact, argumentation is a substitute for physical conflict: instead of fighting, we argue. So, it is perhaps natural that we use the language of physical conflict when speaking of arguments. The very word "argue" is ambiguous between a verbal quarrel and an attempt to reason with one another—throughout this series I use the word in the latter sense.

I use the analogy between argumentation and conflict[3] as much as anyone, because it's awkward to do otherwise. The metaphor is so embedded in our language and thought about arguments that it's hard to avoid[4], but it can be misleading[5].

We call those we argue with our "opponents", the arguments that we make are "attacks" or "defenses", and everybody wants to "win" an argument. Many books have been published that promise to teach you "how to win an argument", but none how to lose one[6] since nobody wants to "lose". But what does it mean to win or lose?

What if you're wrong? What if you're on the wrong side, taking the wrong position? Do you still want to "win"? Wouldn't it be better if you "lost"? Or, to put it another way, wouldn't you be a winner if the argument led you to switch from a false belief to a true one[7]?

Instead of thinking of argumentation as a type of conflict[8], let's think of it as cooperative. You and your partner in argumentation are working together to test a claim: one of you presents the reasons for the claim, and the other the reasons against it. If the debated claim is to be properly tested, it's important that both of you present the strongest cases that you possibly can, but that doesn't make you enemies. When all is said and done, you evaluate the claim. Sometimes it will turn out that you argued

on the side of the claim that survives the debate; sometimes it will turn out that you were on the other side.

If you take this approach to argumentation, you will be less tempted to treat your sparring partner as an enemy to be defeated at all costs. Appeals to force, threats, and personal attacks aimed at your partner will seem as out of place to you as they in fact usually are.

However, the most important advantage is to you, the arguer. An argument need not be a fight that you may lose; rather, it can be an opportunity for you to learn. Anyone who gives you good reasons to change your mind is doing you a favor, not harming you. They are giving you a chance to change your false beliefs into true ones. Will you be ready to grasp that opportunity when it is presented to you?

Next Month: Rule 3

Notes:

1. **Previous entries in this series:**
    1. Rules of Argumentation: Introduction, 11/18/2018
    2. Rule of Argumentation 1: Appeal to reason!, 12/14/2018
2. Oliver Cromwell, "Letter to the General Assembly of the Church of Scotland", 8/3/1650. See: John Bartlett, *Bartlett's Familiar Quotations*, Justin Kaplan, General Editor (16th Edition, 1992).
3. A related but less misleading analogy is that between arguments and games: it's less dangerous because not all games are zero-sum, that is, those in which one wins at the expense of the other, losing player. Instead, I suggest thinking of argumentation as a win-win game.
4. I don't intend to even try to do so except in the remainder of this entry.
5. For a general discussion of misleading analogies, see the fallacy of weak analogy, from the menu to the left.
6. Unsurprisingly, Amazon's advanced search facility shows no books with the title "How to Lose an Argument".
7. This, of course, assumes that you accept the distinction between truth and falsehood. Some of the ancient sophists, and some modern ones as well, rejected that distinction. For such sophists, there is only winning or losing.
8. Some argumentation, such as political debate, takes place in a public forum with an audience. Such arguments are usually given more for the benefit of the audience than the opposing side, and you can't expect one side to jump up in the middle of the debate and admit error, even if the debater suddenly realized it. Moreover, some formal debates have clear rules about who wins and loses; for instance, a lawyer who convinces a judge or jury wins a lawsuit, and the other side loses. For this reason, the analogy with conflicts such as fights and wars is more appropriate to this type of debate than to the informal ones that most of us participate in.

Rule of Argumentation 3[1]:

Focus on Claims and Arguments!

https://fallacyfiles.org/archive022019.html#02132019

February 13th, 2019

The way I usually like to put this rule is: "Keep your eye on the ball!". Unfortunately, most people won't know what "the ball" is and others may not understand the sports metaphor.

As I pointed out in the Introduction to this series, the most general rule of relevance in argumentation is simply: Be relevant! However, it doesn't help much to tell someone to be relevant if they don't know what's relevant. In argumentation, what's logically relevant relates to what I'm calling here "the ball".

Imagine that an argument is like a tennis game[2]. Your goal is to hit the ball over the net, not to hit the other player with it, let alone to hit him with your racket. Another good sports-related way to put this rule is: "Play the ball, not the man!" This means to keep your eye on the ball and don't get distracted by the other player.

What is "the ball" in the analogy of argumentation to a tennis game? It is the topic or subject being debated, that is, the claim or claims that the arguers think they disagree about[3]. In formal debates, there is usually an explicit proposition or resolution that is the topic of the debate, which is "the ball" to keep your eye on. However, the kind of informal debates that most of us engage in most of the time lack a specific topic, which is a major source of difficulty.

Before you can keep your eye on it, you first have to spot the ball. Whenever an argument begins, you should ask yourself: What are we arguing about? If you're not clear about this—and I suspect that much of the time you won't be—how can you expect the other player to be? Often, the players involved don't even agree on what they're arguing about, which is like trying to play a game of tennis with two balls, with each player trying to hit a different ball. Even if you think you know what it is, you should ask the player on the other side what you disagree about. Many an argument is resolved at this stage when the arguers discover that they really don't disagree. However, if you skip this stage, it's possible that the argument may continue indefinitely, with both arguers arguing past each other. Such arguments are frustrating and can easily lead to bad feelings between the arguers, even though they don't actually disagree!

One underappreciated achievement of argumentation is the discovery that you don't substantively disagree with the other side; rather, you just express the same view in

different words. However, the only way you will discover this is if you play the ball—the claim or claims you *seem* to disagree about—and not the other player. If instead of aiming at the ball, you try to hit the other player, you will only make the disagreement between you worse.

It's hard to resist the temptation to play the man instead of the ball when the other player is trying to play *you*. You may naturally feel that you have to defend yourself by replying in kind. Unfortunately, if the other player won't argue cooperatively, there may not be much that you can do except to refuse to play with such a person. This is another way in which cooperative argumentation is like playing tennis: it takes two willing partners.

In future entries, we'll look in more detail at ways you can lose sight of the ball and end up playing the man, instead. For now, keep in mind that the goal of this game is not to defeat your opponent, but to use arguments to put claims to the test.

Next Month: Rule 4

Notes:

1. **Previous entries in this series:**
    1. Rules of Argumentation: Introduction, 11/18/2018
    2. Rule of Argumentation 1: Appeal to reason!, 12/14/2018
    3. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019
2. Many games with a ball and two players or teams would work, so feel free to substitute your favorite.
3. At least for the sake of the argument: some arguers play Devil's advocate.

Rule of Argumentation 4[1]:
Be as Definite as Possible!

https://fallacyfiles.org/archive032019.html#03082019

March 8th, 2019

Before proceeding to this month's rule, I want to mention something that I should have explained earlier in this series, probably in the introduction: Each of these rules is a heuristic or "rule of thumb". In other words, there are exceptions to all of them, that is, situations in which you should not follow them, but such situations are exceptional.

Previous rules in this series were rules that governed the overall process of arguing: appealing to reason, acknowledging one's own fallibility, and focusing on arguments themselves rather than arguers. This is the first rule that deals with the content of argumentation. It says that the claims and arguments you make should be as definite as possible.

In order to be as definite as possible myself, I will explain what I mean by both "definite" and "possible":

- **Definiteness:** Most words, phrases, and even sentences in natural languages are ambiguous, that is, they have more than one meaning. The word "definite" itself is such a word, but one of its many meanings is "unambiguous", and that's how I mean it in this rule[2].

  One problem with ambiguity is, of course, that an ambiguous claim or argument may be misunderstood by your partner in argumentation or your audience. As a result, you may find that you and your partner are arguing past one another, and your audience may reject your arguments and claims because they misunderstand them. If your partner or audience raise questions or objections that make no sense to you, this is a sign that they may be misinterpreting something you have asserted. If such a situation arises, try to track the ambiguity to its source and correct it.

  Not only may others misunderstand your arguments if you are not sufficiently definite, but you may even misinterpret them yourself. Ambiguity gives rise to a whole class of fallacies in which a word, phrase, or sentence occurs in both a premiss and the conclusion with different meanings. Such an argument may give a superficial appearance of cogency, but it actually changes the subject.

  In order to avoid ambiguity, it's useful to be aware of the ways in which language can be ambiguous, of which there are two principal ones[3]:

1. **Lexical Ambiguity:** This is the ambiguity affecting individual words and phrases, which can lead to fallacies of equivocation.

2. **Grammatical Ambiguity:** This is ambiguity affecting phrases and whole sentences that results when their grammatical structure can be interpreted in more than one way. When it produces fallacies, such ambiguity is called "amphiboly".

- There are also two types of definiteness needed to avoid ambiguity:

    1. **Local:** By "local" definiteness, I mean that the individual words, phrases, and sentences that you write should be univocal within their context, that is, they should have a single meaning.

    2. **Global:** In order to avoid fallacies, it is not only necessary that each occurrence of an individual word, phrase, or sentence should have a single, definite meaning, but that these meanings should be consistent across the context in which they occur. In other words, if a specific word has a definite meaning in one place, then it should have that same meaning in any other place it occurs. So, it's not enough that each occurrence be definite in meaning, but the meaning needs to be consistent across different occurrences.

- **Possibility:** Because of the pervasive ambiguity of natural languages, it is usually not possible to be perfectly unambiguous. However, it is usually possible to be as unambiguous as needed in a given context. For this reason, the rule is not to be perfectly unambiguous, but to be as definite as you can. So, you needn't try to be perfectly definite, but only as definite as required in the situation you find yourself in to avoid misunderstandings and fallacies.

Next Month: Rule 5

Notes:

1. **Previous entries in this series:**
    1. Rules of Argumentation: Introduction, 11/18/2018
    2. Rule of Argumentation 1: Appeal to reason!, 12/14/2018
    3. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019
    4. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019
2. Unfortunately, there doesn't appear to be a synonym for "unambiguous" lacking a negative prefix, so I choose the ambiguous "definite" so as to remain as affirmative as possible in this rule.

3. For more on the types of ambiguity, including subtypes and examples, see the entry for the fallacy of Ambiguity.

Rule of Argumentation 5[1]:
Be as Precise as Necessary!

https://fallacyfiles.org/archive052019.html#05292019

May 29th, 2019

In case you've been waiting on tenterhooks[2] for the next entry in this series, my apologies for being a month late.

The last entry, if you remember[3], admonished you to be as definite as possible when arguing, where "definite" meant unambiguous. This rule is similar, but deals with vagueness.

Just as most words in natural language are ambiguous, most are also vague. What does it mean for a word to be vague[4]? It means that it is not always clear whether the word applies to something, that is, there are borderline cases. For instance, consider the words "short" and "tall" as applied to people: a seven-foot tall woman is clearly not a short woman; instead, she is tall. In contrast, a five-foot tall man is obviously not a tall man, but a short one. These are clear-cut cases, but what about a man—let's call him "Stretch"—who is 5' 10": is he tall? He's an inch above average height[5], so he's not short, but is he tall enough to call him "tall"? Stretch is a borderline case, that is, it's unclear whether he is tall.

What if we put Stretch on tenterhooks and stretch him out another inch? Another two inches? It's not clear how much we would have to stretch him before he became tall. If we managed to stretch him to, say, 6' 3", without killing him, then he'd clearly be a tall man. However, there's no precise line in between 5' 10" and 6' 3" where he would suddenly go from not tall to tall. This is characteristic of vague terms: there is a sort of twilight zone between short and tall occupied by people like Stretch, who are neither short nor tall, but the boundaries of this zone are themselves unclear. There is not only no sharp cutoff between short and tall, there is no sharp cutoff between the vague terms and the twilight zone between them.

As with ambiguity, vagueness in language is usually clarified by context, but it can and does cause problems in reasoning[6]. For instance, the fact that there are no precise conceptual differences between contrary terms that lie on a continuum—such as "short" and "tall"—can lead people to think that there's really no difference between them. The moral and political debate over abortion is bedeviled by the fact that there is a developmental continuum between a fertilized ovum and an adult human being, and thus no sharp line between non-person and person.

Moreover, just as a fuzzy picture may be unclear as to what it depicts, fuzzy language paints an unclear picture of the world and, at its worst, it may say hardly anything.

Vagueness is one of the common tools of the politician who wants to avoid being pinned down on issues, and to appeal to every part of the political spectrum or, at least, to offend no one.

The previous rule on ambiguity advised you to be as unambiguous as possible, but this rule advises you only to be as precise as necessary. This is because excessive precision is itself a fallacy, called "over-precision". Over-precision is bad because it is unnecessary and can mislead. Over-precision is unnecessary by definition: otherwise, it wouldn't be "over", that is, too much precision. It is misleading when it makes people think that a measurement is more precise than it actually is.

So, in your arguments with others try to find the golden mean[7] of precision between vagueness and over-precision. Fittingly, the distinction between the two lies on a continuum of precision with a fuzzy zone in between. For this reason, I can't give you precise definitions of either vagueness or precision, but I don't need to. Just aim for the twilight zone.

Next Month: Rule 6

Notes:

1. **Previous entries in this series:**
    1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
    2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
    3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
    4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
2. A tenter is a frame used to stretch cloth, and a tenterhook is a hook used to hold the cloth in place. So, if you're on tenterhooks, you're like a cloth stretched tight in a state of tension and suspense. See: William & Mary Morris, *Dictionary of Word and Phrase Origins* (1962), under "tenterhooks".
3. If you don't, see rule 4 in the list in note 1.
4. For more on vagueness, see the entry for the fallacy of that name in the alphabetical list of fallacies to your left.
5. According to Wolfram Alpha, see: "What is the average height of an adult male human being?", accessed: 5/26/2019.
6. For the fallacies that can result from vagueness, see the entry for the fallacy of that name and its subfallacies in the alphabetical list to your left.
7. According to Aristotle, a virtue is a mean between the extremes of two vices; for instance, courage is a mean between cowardice and rashness. The poet Horace referred to it as "the golden mean". See: Antony Flew, *A Dictionary of Philosophy* (Revised 2nd edition, 1984).

Rule of Argumentation 6[1]:
Defend Your Position!

https://fallacyfiles.org/archive072019.html#07072019

July 7th, 2019

This is how arguments usually start: someone makes an affirmative claim that someone else either denies or at least doubts and challenges. If you are the person making a claim and someone challenges it, the burden is on you to defend that claim. If you cannot or do not wish to defend it, then you should withdraw it[2].

You may be familiar with the notion of burden of proof in the Anglo-American legal system. In a criminal case, the burden of proof is on the prosecution to prove the defendant's guilt beyond a reasonable doubt. At the very least, the prosecutor must present a *prima facie*[3] case for guilt. If the prosecution succeeds in presenting a *prima facie* case then the burden of proof switches from the prosecution to the defense. However, if the prosecutor fails to present such a case then the defense wins, that is, the defendant need not even present a case unless the prosecution meets its burden of proof.

Another way of making this same point is that in the Anglo-American legal tradition there is a presumption of innocence, that is, the defendant is presumed innocent until proven guilty. The presumption of innocence is the other side of the burden of proof coin: the burden is on the prosecution and the presumption is in favor of the defendant. If the prosecutor meets the burden with a *prima facie* case, then the burden and presumption switch: the burden is then on the defense to rebut the prosecution's case sufficiently to show a reasonable doubt of the defendant's guilt.

The notions of burden of proof, presumption, *prima facie* evidence, and the shifting of the burden of proof can all be extended from the legal realm to argumentation in general. However, it's not obvious who gets the burden and who gets the presumption, that is, who plays the role of the prosecutor and who the defendant?

The answer is that the burden is on the affirmative rather than the negative, that is, on he who affirms as opposed to she who denies. The reason for this is an asymmetry between affirmative claims and denials, namely, that it is much easier to find evidence for an affirmation than a negation[4]. Moreover, unless they just blurt out claims for no reason, those who introduce a claim should be able to produce some evidence to support it. In contrast, you may be skeptical of a claim without having studied or considered the matter enough to present evidence against it.

The burden of proof is not all or nothing, but comes in degrees. If you assert a plausible claim then the burden of proof will be light, whereas an implausible claim

places a heavy burden on you. This is the basis for the familiar saying that extraordinary claims require extraordinary evidence[5].

Logical fallacies that result from attempts to evade the burden of proof include[6]:

- **Appeal to Ignorance:** Ignorance is appealed to when a lack of evidence against an affirmative claim is taken as evidence in favor of it. In other words, an appeal to ignorance treats an affirmation as if the presumption was in its favor, thus placing the burden of proof on the challenger to disprove a challenged claim. Remember: the burden of proof is on the affirmative.

- **Begging the Question:** The question is begged when the proponent fails to present a *prima facie* case for a claim yet refuses to withdraw it. The question can be begged in many ways, for instance, by repeating the claim in other words, or by educing evidence for a claim that is at least as implausible as the original claim.

So, the burden of this rule is that if you make an affirmative claim, be prepared to defend it. If, in contrast, you are the challenger and the proponent of the challenged claim makes a *prima facie* case, then accept the burden of proof. It is now up to you to either make a case against the claim, or to accept it.

Next Month: Rule 7

Notes:

1. **Previous entries in this series:**
    1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
    2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
    3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
    4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
    5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
2. As with all the rules discussed in this series, this is a rule of thumb, that is, a rule that has exceptions. For this rule, common sense is an exception. For instance, a person who asserts that every living thing eventually dies does not bear the burden. Instead, those who challenge such a claim must make a *prima facie* case against it, and only then does the burden shift to the claimant.
3. Latin for "at first sight". See: Eugene Ehrlich, *Amo, Amas, Amat and More: How to Use Latin to Your Own Advantage and to the Astonishment of Others* (1985). A *prima facie* case for a claim is one that is sufficiently strong to prove the claim unless successfully rebutted.
4. It is often said that you can't prove a negative, which is over-stated but a good rule of thumb. For an explanation of how much truth there is in this saying, see: Logical Literacy: "You can't prove a negative.", 7/14/2015.

5. Popularized by the astronomer Carl Sagan, see: *Broca's Brain: Reflections on the Romance of Science* (1980), p. 73.
6. For more on each fallacy, see the entries under the names of the fallacies available from the drop-down menu in the navigation pane to your left.

Rule of Argumentation 7[1]:
Aim at Objectivity!

https://fallacyfiles.org/archive082019.html#08092019

August 9th, 2019

Objectivity seems to have a bad reputation nowadays, so the first thing I need to do is explain why you shouldn't be prejudiced against it. Unfortunately, "objective" and "subjective" have several different meanings, which is one reason for the confusion surrounding the topic of objectivity.

Objectivity, of course, contrasts with subjectivity[2], and it's easier to get at what I mean by the former by talking about the latter. The relevant sense of "subjective" is at least similar in meaning to "biased", "prejudiced", or "partial", so that as I use it the word "objective" means "unbiased", "unprejudiced", or "impartial". This means that other ways of stating this rule would be: Aim at being unbiased (or unprejudiced, or impartial)![3]

Why is there a bias against objectivity? There are two broad categories of argument[4] against it:

1. **Objectivity is impossible:** Is objectivity possible? The arguments that it is not are hard to pin down, but they seem to involve pointing to the fact that everyone has biases. We all see the world from a particular point of view, and there's no way to see it through someone else's eyes, let alone from a God's eye viewpoint that sees everything.All that's true enough, and if I was recommending that you adopt a God-like viewpoint you'd be right to reject it as impossible. God, if such a thing exists, is *perfectly* objective and, of course, I am not asking you to be perfect.

   Consider the following argument: we are all imperfect and, therefore, sinners. It is impossible for us not to sin. Since "ought" implies "can", and we cannot fail to sin, then it's not the case that we ought not sin. That is, morality is impossible, and therefore non-obligatory. Therefore, do what thou wilt!

   What's wrong with the above argument? It's a *non sequitur*: while it may well be true that it is impossible for anyone to be perfectly moral, that doesn't mean that we cannot be more or less moral. It's true, as the argument says, that "ought" implies "can", which means that we are not morally required to be perfect. Rather, the rule is that we should be as moral *as we can be*.

If you substitute the word "objective" for the word "moral" in the above argument then, *mutatis mutandis*, you have the argument against objectivity on the grounds that it is impossible. Perfect objectivity may well be unachievable[5] but, just as we can be more or less moral, we can be *more* objective or *less* objective, and the rule is: Be as objective as you can be!

It may be objected that you can't even aim at what you can't achieve, but it's no argument against aiming at morality that it can never be achieved. While perfection may be unattainable, we can always get closer to it. Moreover, we will certainly approximate these goals to a lesser extent if we don't even aim at them.

2. **Objectivity is undesirable:** Given that one accepts the above argument that it is possible to aim at objectivity, a fall-back position for those who oppose it is that objectivity is undesirable. The notion that objectivity is not desirable usually comes from passionate advocates for causes. For such advocates their causes are all-important, and there's no guarantee that an objective examination of the facts will support those causes. For instance, one characteristic of objective research is that the results are not determined in advance; if they are, then it is *advocacy* research[6]. Similarly, the outcome of objective journalism is not pre-determined to support one's favorite cause, unless the reporter is engaged in *advocacy* journalism[7].

   The goal of objectivity is to discover the truth, the whole truth, and nothing but the truth, whereas advocacy at its best usually leaves out the middle one of this triad: the advocate only tells that part of the truth that advances the cause. At its worst, advocacy researchers and journalists suppress information, distort the facts, or even lie to advance their preferred causes[8].

   In order to be an honest and effective advocate of a position, one must be able to objectively evaluate the other side's arguments as well as see the strengths and weaknesses in one's own. If you don't know or understand your opponent's arguments, how can you expect to answer them?

   Moreover, the way in which objectivity is pursued in some of our social institutions—notably, in the Anglo-American legal tradition—is through an adversarial process in which each side advocates its position. Similarly, the social institution of debate involves two or more advocates presenting cases for and against some position. While each side presents a one-sided case for its position, the goal is for the whole truth to come out through the entire process. In these institutions, the role of an honest advocate advances the cause of objectivity. Finally, in any such adversarial process, a decision must be reached by a judge or jury, and those who judge must aim at justice, fairness, and impartiality—in a word, objectivity.

So, there is a place for open and honest advocacy, and there is also a place for objective research and reporting. Objectivity does not preclude advocacy, and honest advocacy need not reject objectivity. Advocacy and objectivity are not enemies; rather, objectivity is the friend of honest advocates and the enemy of only the dishonest ones.

Given that you accept that the goal of being less biased and more objective is both possible and desirable, even in your role as an advocate, how can you do it? I have three simple and practical suggestions:

1. **Know your biases!** You should know your biases better than anyone else does. What is your religion if any? What are your moral beliefs? What are your political opinions? Knowing your biases won't by itself make you any less biased, but it's a necessary step to take before the following one.

2. **Compensate for your biases!** If a boat is listing over to one side, you can compensate for it by moving heavy objects to the other side until the boat levels out. Similarly, once you know your own directions of bias, you can compensate by bending over backwards—or sideways, as the case may be—to give the side you are biased against a fair chance.

3. **Don't be afraid to change your mind!** Rule 2, you may remember[9], is: Be ready to be wrong! That is, be open-minded to changing your beliefs if confronted by sufficient evidence. The attitude I was recommending there is a positive one towards changing your beliefs. People often react to arguments against their existing beliefs as if they are being personally attacked, especially if those beliefs are religious, moral, or political ones. These beliefs are often central to one's sense of self, but do you want your identity founded upon falsehoods? If you realize that changing a false belief to a true one is a gain, rather than a harm, you won't be afraid to change your mind.

If you follow these simple steps, I can't guarantee that you will be completely objective, but if you don't even know your own biases, if you make no effort to compensate for them, and if you're afraid to change your mind, then you will be *more* biased than if you make an honest effort to follow these suggestions. I guarantee it.

Next Month: Rule 8

Notes:

1. **Previous entries in this series:**
    1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
    2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
    3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.

    4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
    5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
    6. Rule of Argumentation 6: Defend your position!, 7/7/2019.
2. Another relevant contrast is between metaphysical objectivity, which has to do with whether there is an objective world independent of the human mind, and epistemological objectivity, which deals with whether the human mind can know that objective reality. This entry deals with the latter type of objectivity, and I assume here that there is an objective reality.
3. One reason that I don't actually phrase the rule in one of these alternative ways is that in this series I'm trying to be as positive as possible, so I use "objective" instead of "unbiased", "unprejudiced", or "impartial" due to the negative prefixes in the latter words. Another reason is that the prejudice against the word "objectivity" is unwarranted, as I argue below, and should be resisted. However, if you prefer to avoid the anathema word "objectivity" and think of this rule instead in terms of "unbiased", "impartial", "neutral", or "intellectually honest", be my guest.
4. This note is a digression relating to the recent theme on this weblog of fact-checking: If objectivity is impossible or undesirable, then fact-checking is also impossible or undesirable. If objectivity is impossible, then either there are no facts to check or the fact-checker cannot do so; and, if objectivity is undesirable, then the fact-checker shouldn't do so.
5. I'm not so sure that it is, but I don't need perfect objectivity to be attainable for my argument above to work; all I need is that it's possible to be more or less biased, which seems to be undeniable.
6. For an egregious example, see: Headline, 12/11/2011.
7. I've discussed advocacy journalism further here: New Book: *Skewed*, 7/7/2017.
8. There are many examples throughout these files, but here's a good one of advocacy journalism: Fake News Headline, 12/19/2016.
9. If you don't, you might want to revisit it. See under note 1, above.

Rule of Argumentation 8[1]:
Consider All the Evidence!

https://fallacyfiles.org/archive092019.html#09192019

September 19th, 2019

This rule could be considered a sub-rule of the previous one to aim at objectivity, because part of aiming for objectivity is considering all of the evidence before coming to a conclusion. However, I have a lot to say about this topic, so I've decided to make it into a separate rule.

The reasoning that you appeal to in your arguments can be divided into two broad categories:

1. **Deduction:** Deductive reasoning has a nice property: if an argument is valid, then it will remain valid if you add an additional premiss—*any* additional premiss. In other words, a deductive argument that is valid will not be rendered invalid by new evidence. For instance, consider the valid deductive argument:

   > All swans are white.
   > Odette is a swan.
   > Therefore, Odette is white.

   No additional premisses added to this argument will create an invalid argument. For instance, what about Odile, who is a black swan from Australia? Odile shows that the first premiss of the argument is false, but the argument itself is still valid, because *if* the premisses were true then the conclusion would also be true[2].

   Though new evidence cannot make a valid argument become invalid, it can cause a sound argument to become unsound, which is what Odile does to the above argument. Soundness is a more important property than validity, because it is only through soundness that we know that we're proceeding from truth in the premisses to truth in the conclusion. If any of the relevant premisses of a valid argument are false, then the conclusion may or may not be true. So, false premisses give no good reason for believing the conclusion of a valid deductive argument.

2. **Induction:** Unless you are doing mathematics or logic, much of your reasoning will be inductive. There is a little-known, but important principle of inductive reasoning called "the total evidence requirement[3]": all relevant evidence must be considered. Inductive reasoning can be weakened by the introduction of new information. Compare the following inductive argument to the deductive one above:

Every swan that I have seen before today was white.
Therefore, all swans are white.

If I then see Odile today, I am no longer justified in concluding that *all* swans are white[4], since the evidence of Odile weakens the argument.

So, whether you're reasoning deductively or inductively, you need to look for all the evidence that has a bearing on your conclusion. If you don't look for the evidence that shows that conclusion false, you won't find it even if it's there.

Moreover, even if you're acting as an advocate, it's still important to examine all the evidence. There are two reasons for this:

1. **Avoiding Nasty Surprises:** One reason that you need to be aware of all the evidence is so that you won't be surprised when your opponent presents it[5]. If your opponent reveals an important piece of evidence that undermines your case, you will be caught without a defense if you aren't even aware of its existence[6]. A good advocate will be prepared to rebut any such counter-evidence.

2. **Planning Your Strategy:** Another reason to be aware of all of the evidence as soon as possible is because you need it in order to plan your argumentative strategy. As an advocate, you don't want to take up an indefensible position, since you may lose the battle. As in war, it is sometimes better to make a strategic retreat to a more defensible position than to make a suicidal stand.

   For instance, suppose that you are a defense attorney defending a client against a murder charge. If, in the course of assembling your case, you discover evidence that strongly indicates that your client is guilty, you may want to pursue a plea bargain for your client, rather than to go to trial. Either that, or you may suggest that your client plead guilty and then argue for leniency at sentencing.

There are two steps to applying this rule:

1. **Seek all of the evidence:** Before you can consider it, you must gather as much of the evidence as you can. In particular, look for evidence that counts against your case. As I argued in the previous rule, one way to aim at objectivity is to compensate for your own biases. If you are an advocate for a particular position then you are biased in favor of it. The temptation, especially if you're an advocate, is to only look for evidence that will reinforce your case. Instead, make a point of thinking about what sort of evidence would undermine your case, then look for it. If you don't find evidence against your case, excellent! Then you can be more confident that you have a strong case. If you do find evidence that undermines your case, then you can either prepare a defense against it or consider changing your position to counter it, as explained above. Remember Feynman's principle: don't fool yourself[7]!

2. **Weigh all of the evidence:** Once you have gathered all of the relevant evidence that you can find, you need to take it into consideration when drawing your conclusions. I'll have more to say about how to do this in a future entry.

There are two problems with applying this rule:

1. **You never have *all* of the evidence:** If this is true, it may seem that I am once again asking you to do the impossible. However, as in the objectivity rule, I'm not asking the impossible, just that you consider all of the relevant evidence that you find after making a sincere effort to find it all.

   The fact that you never do have all of the evidence is a good reason to be cautious in your conclusions. For instance, you may conclude, based on extensive experience, that all swans are white, but a single black swan will overturn that conclusion. If, swan-like, you stick your neck out and claim that all swans are white, your opponent may chop your head off. For that reason, you may want to hedge your claim.

2. **What counts as evidence?:** Not everything counts as evidence. Only facts that are relevant to the claim at issue are evidence. What is relevant? Any fact which changes the probability that the claim is true is a relevant piece of evidence. To return to the defense attorney example: the issue is whether your client is guilty. Thus, any fact that makes it either less likely or more likely that your client is guilty is relevant evidence. I'll have more to say on relevance in a future entry.

So, if you consider all of the evidence that I've given above, I hope you will come to the conclusion that you should, indeed, consider all the evidence.

Next Month: Rule 9

Notes:

1. **Previous entries in this series:**
   1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
   2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
   3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
   4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
   5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
   6. Rule of Argumentation 6: Defend your position!, 7/7/2019.
   7. Rule of Argumentation 7: Aim at objectivity!, 8/9/2019.
2. This is the definition of "valid".
3. See: Patrick J. Hurley, A Concise Introduction to Logic (10th edition), section 1.4.
4. Though I might be justified in concluding that *almost* all are, or *most* are.
5. Throughout this part of the entry I am going to use the analogy of argumentation to war, fighting, and other types of conflict. I criticized this analogy in a previous

lesson—see rule 3, under note 1, above—but as I pointed out in a footnote, it's almost impossible not to use it. Keep in mind that it's only an analogy, and can be misleading, though in this case I hope it will help the reader understand the points I'm making.

6. For instance, feminist writer Naomi Wolf was blind-sided by evidence that undermined the case she made in her most recent book, and as a result was publicly humiliated and had the book's publication delayed. See: Wolf's Howler, 5/31/2019.
7. The full statement of the principle is: "The first principle is that you must not fool yourself—and you are the easiest person to fool." See the entry for rule 6, under note 1, above.

Rule of Argumentation 9[1]:
Agree about What You Disagree About!

https://fallacyfiles.org/archive102019.html#10202019

October 20th, 2019

If you recall way back in Rule 3[2], I asked you to “Keep your eye on the ball!” when arguing, by which I meant that you should focus on the subject of disagreement and not get distracted by irrelevancies. That rule was mainly an introduction to and an attempt to convince you of the importance of relevance in argumentation, and I didn't give specific advice about how to be relevant. The current rule is a follow-up giving such advice, and I'll assume that you have read and remember Rule 3 and don't need another pep talk.

"Agree about what you disagree about" is an ambiguous sentence, since it may sound as if I'm suggesting you should find out what you and your partner in argumentation[3] disagree about, then change that disagreement to agreement. Instead, the agreement and disagreement I'm talking about are on different levels:

1. **First-Level:** Agreement and disagreement on this level is about whatever has prompted the argument. However, an argument won't even start unless you and your partner disagree about something, or at least think that you do. Given that you do both think that you disagree about something on the first level, then the next level of agreement or disagreement becomes important.

2. **Second-Level:** Agreement and disagreement on level two is about the first level, that is, you either agree or disagree about whatever you think you disagree about on the first level. The rule asks you to seek agreement on this level, so that both you and your partner understand the nature of your first-level disagreement in the same way. If you do not understand it in the same way, you will be arguing past each other

In other words, this rule asks you to seek second-level agreement with your partner about the nature of your first-level disagreement. A further complication is that there are two types of first-level disagreement, namely, substantive and verbal:

- **Substantive:** If you and your partner disagree primarily about the facts rather than the language used to describe them, then you have a substantive disagreement. This type of disagreement is often harder to resolve than a verbal one, but you need to identify the nature of the disagreement in order to resolve it.

- **Verbal:** A verbal disagreement is one in which you and your partner primarily disagree about the language used to describe the facts rather than the facts themselves. Such disagreements may be real, since language is important, but less is usually at stake than in substantive disagreements.

In order to determine whether the disagreement is verbal or substantive, you need to identify the point of contention. There are two steps to doing this:

1. **State:** Decide in your own mind what you and your partner disagree about, then formulate that point as a statement, or proposition—that is, a sentence that is either true or false. If you cannot do this, then you're probably too confused to continue with the argument. However, if you have trouble doing so, you might want to ask your partner to formulate it.

2. **Verify:** After you've formulated in your own mind the point of disagreement, you should verify it with your partner. It's at this point that you're most likely to discover that you don't even agree on what you disagree about. If you disagree about the point as you've formulated it, then either you disagree about the words you've used to state it or about some other substantive issue. If so, you might want to ask your partner to formulate such a proposition, then see if you agree with your partner's statement of the first-level disagreement. This may reveal either that that disagreement is verbal, or that there is some other substantive point on which the two of you disagree. In either case, you're making progress.

In any case, before proceeding to try to resolve your first-level disagreement, you and your partner should achieve second-level agreement about it. If necessary, repeat the above steps until you have done so. If you can't achieve second-level agreement, there's not much point in trying to resolve the first-level disagreement, since you don't even know what it is. If you succeed in establishing such a second-level agreement, then you, and hopefully your partner too, will be able to keep your eyes on the ball and focus your arguments on the point of disagreement rather than on various distractions and irrelevancies.

Next Month: Rule 10

Notes:

1. Previous entries in this series:

1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
6. Rule of Argumentation 6: Defend your position!, 7/7/2019.

7. Rule of Argumentation 7: Aim at objectivity!, 8/9/2019.
8. Rule of Argumentation 8: Consider all the evidence!, 9/19/2019.

2. The current rule would have come earlier in the sequence of rules—probably as rule 4—except that I've been producing the rules as I think about them rather than in logical order. In a future entry, after the entire set of rules is complete, I intend to provide a more logical ordering.
3. By "partner in argumentation", or "partner" for short, I mean the person with whom you are arguing. I use this phrase in preference to the more common "opponent" in order to avoid the suggestion that this is a conflict that only one of you can win.

Rule of Argumentation 10[1]:
Attack or Defend Claims!

https://fallacyfiles.org/archive112019.html#11122019

November 12th, 2019

This rule is an extension of rule 3, namely, to focus on claims and arguments. That rule did not go into much detail on how to do this, but this one and the next go into more detail. This rule deals with the first part of rule 3, that is, focusing on claims.

The previous rule admonished you to come to an agreement with your partner in argumentation on the nature of your disagreement. Once you have identified the point of disagreement, then you should make your arguments relevant to that proposition. Under this rule, I'm going to use the word "claim" to refer to any statement or proposition, such as the point of disagreement, either advanced or denied by you or your partner.

By "attack or defend claims", I mean that you should focus your arguments on the claims that are made by you or your partner. To "attack" a claim is to present other claims that tend to show the claim false or at least less probable, whereas to "defend" one is to make claims that support its truth or make it more probable. In other words, you will be making arguments[2] either for or against claims. If the claim in question is the point of disagreement between you and your partner in argumentation then, since you two disagree, either you think that the point is true or at least probable whereas your partner thinks that it is false or improbable. If you think the point is false, then your job is to attack it, whereas if you think it true you should defend it.

In attacking claims, you're most likely to miss the target by aiming your arguments at something close to it, but nevertheless distinct. Claims are distinct from their motivations, histories, and the effects on people of holding them. However, such matters are so closely associated with the claims that it is easy to mistake them for the claims themselves. In order to keep your arguments on target—that is, relevant—distinguish claims from the following:

1. **Motivation:** A claim is a sentence that is either true or false, whereas a motivation is not a sentence but a psychological state. Everyone who makes or denies a claim has some psychological reason for doing so, but that motivation is not the same as the claim itself. Moreover, another person who makes the same claim will have a distinct psychological motive for doing so, based on that person's unique personality. There is always a temptation to direct your arguments against what you take to be your partner's motivations for advancing or attacking a claim, but to do so misses the target.

Furthermore, it's very easy to misunderstand your partner's motivation, since you can't read minds. If you do misread your partner and attack the wrong motivation, your partner will be upset, just as you would be if your partner did that to you. This has a tendency to turn a rational discussion into a personal quarrel. Remember to play the ball, not the player!

2. **History:** Every claim has a history, such as who was the first to advance it, who attacked it, what groups supported or opposed it, and so on. All of this history can be interesting and useful, but it is distinct from the claim itself. Some claims with disreputable histories have turned out to be true, just as some with noble lineages are false. For instance, the notion that the Sun revolves around the Earth was believed by most people and even supported by astronomers until Copernicus. So, the history of a claim is distinct from its truth or falsity.

3. **Effects:** By the "effects" of a claim I refer to the effects on people of belief or disbelief in it. Some false beliefs may have beneficial effects on those who believe them; for instance, belief in the Tooth Fairy may make children feel better about losing teeth than they otherwise would. Similarly, some true beliefs may have bad effects on us, such as the knowledge of the death of a loved one. Thus, the fact that a claim may make us happy or sad, or lead us to behave better or worse, is distinct from its truth or falsity.

To sum up, claims should stand or fall on the basis of the strength of the arguments for or against them, and not based on irrelevancies such as the motivation for making them, their history, or their effects on people. How to judge the strength of such arguments will be the subject of the next rule.

Next Month: Rule 11

Notes:

1. **Previous entries in this series:**
    1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
    2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
    3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
    4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
    5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
    6. Rule of Argumentation 6: Defend your position!, 7/7/2019.
    7. Rule of Argumentation 7: Aim at objectivity!, 8/9/2019.
    8. Rule of Argumentation 8: Consider all the evidence!, 9/19/2019.
    9. Rule of Argumentation 9: Agree about what you disagree about!, 10/20/2019.

2. There's an ambiguity here that may be confusing: one sense of "argument" is the whole discussion or debate between you and your partner, and another is the logical sense of an "argument" as a series of propositions meant to support a

conclusion. I'm using the logical sense here. Also, I usually use the longer word "argumentation" for the first sense.

Rule of Argumentation 11[1]:
Make Your Arguments Relevant to Claims!

https://fallacyfiles.org/archive122019.html#12222019

December 22nd, 2019

The previous rule invited you to focus your argumentation on claims, and not be distracted by irrelevancies. In this rule, I will discuss in more detail how to make your arguments relevant to the claims you are arguing about.

As discussed in rule 9, argumentation won't begin unless you and your partner think that you disagree about something, and that something can be stated as a claim—that is, a sentence that is true or false. Your argumentation should consist of a series of individual arguments relevant to that claim or to other claims that have arisen during the discussion.

Logically speaking, an argument is a series of claims, one of which is called "the conclusion" and the remainder are "premisses"2. There are two ways for an argument to be relevant to a claim:

1. The premisses provide support for the claim, thereby making it more likely that it is true. This is what I called, in the previous rule, "defending" a claim.

2. The premisses provide support for the negation of a claim, thereby making it more likely that the claim is false. This is what I called, in the previous rule, "attacking" a claim.

In addition, there are two degrees of support that an argument can give to its conclusion:

1. The premisses provide conclusive support for the conclusion, thereby showing that the conclusion is true assuming that the premisses themselves are true. Such an argument is called "deductively valid".

2. The premisses provide less than conclusive support for the conclusion, but make it more likely that the conclusion is true given that the premisses are true. Such an argument is called "inductively strong".

These two types of argument are important because what counts as relevant to a claim depends on which type of support the argument is supposed to provide. Deductive relevance is studied in formal logic and inductive relevance in probability theory. Unfortunately, there is no short cut to fully understanding relevance than to study logic3 and probability theory4. As a result, this isn't the place to go into detail about

either deductive or inductive relevance.

However, short of learning logic or probability theory, here is an informal technique for evaluating the relevance of premisses to a conclusion:

1. **Deductive:** Put aside for the moment the question of whether the argument's premisses are true or false and assume that they are true. Will the conclusion also be true? Can you imagine circumstances in which the conclusion would be false? If assuming that the premisses are true means that the conclusion would have to be true—or, in other words, in no circumstances would it be false—then the argument is deductively valid. In contrast, if you can imagine a possible situation in which the premisses are true and the conclusion false, then the argument is invalid. However, if it is invalid it still might be a strong inductive argument, so don't stop here but go to the next step:

2. **Inductive:** Again, assume that the argument's premisses are true. Does that assumption make it more likely that the conclusion is true? If so, how much more likely does it make it? Deductive validity is an all-or-nothing affair, that is, either an argument is valid or it isn't. In contrast, inductive strength is a matter of degree. A set of premisses might make a certain conclusion no more likely, almost certain, or anywhere in between. Try to get a sense of just how strong the argument is.

The logical strength of an argument just described is a measure of how relevant its premisses are to its conclusion. However, strength is not enough to make an argument good. It is also necessary that the premisses be true or at least probable.

Just as claims are sometimes confused with their histories, effects, or motivations, arguments are sometimes confused with their sources. By "source" I mean to include both the person or group advancing an argument, and others who may defend it. Too often people confuse an argument with its source, and instead of evaluating or criticizing the argument itself, they evaluate its source. There are many different ways in which this is done, and many of them are named fallacies5, but what these mistakes have in common is that the argument targets the source of the argument instead of the argument itself. Good arguments can come from bad sources, and bad arguments can come from good ones. So, when you follow the steps above, ignore its source and concentrate on the argument itself as a series of claims.

Next Month: Rule 12

Notes:

1. **Previous entries in this series:**
    1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.

    2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
    3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
    4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
    5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
    6. Rule of Argumentation 6: Defend your position!, 7/7/2019.
    7. Rule of Argumentation 7: Aim at objectivity!, 8/9/2019.
    8. Rule of Argumentation 8: Consider all the evidence!, 9/19/2019.
    9. Rule of Argumentation 9: Agree about what you disagree about!, 10/20/2019.
    10. Rule of Argumentation 10: Attack or defend claims!, 11/12/2019.
2. Often spelled "premises".
3. You can begin studying logic by accessing the Lessons in Logic from the navigational pane to your left.
4. You can begin studying probability by accessing the entry for Probabilistic Fallacy from the drop-down menu to your left.
5. If you wish to pursue this issue further, see the fallacy of Red Herring and its subfallacies, which are available from the drop-down menu to your left.

Rule of Argumentation 12[1]:
Proportion Your Beliefs to the Evidence!

https://fallacyfiles.org/archive012020.html#01212020

January 21st, 2020

Despite the way people often talk, belief is not an all-or-nothing affair. Some of your beliefs will be stronger than others, and even your disbeliefs come in degrees. No doubt you believe very strongly that 2 + 2 = 4, as well you should, and also that the Earth is a sphere, but you should believe the mathematical fact more strongly than the astronomical one, because mathematical evidence is stronger than astronomical.

To proportion the strength of your convictions to the evidence that supports them means that a belief for which you have strong evidence should be a strong belief, and one for which you have minimal evidence should be weaker. How can you go about following this rule, that is, how should you evaluate the evidence in order to determine how to proportion your belief to it?

Imagine that in your mind is a set of old-fashioned scales, with two pans that allow you to weigh two sets of objects against one another. In your mental scales you will not be weighing physical objects against one another to see which is heavier; instead, you will weigh the evidence for and against an hypothesis in the mental pans. One mental pan will be for the evidence that supports the hypothesis, and the other for that which undermines it.

Having imagined your mental scales, ask yourself the following questions:

1. **What hypothesis are you testing?** Before you begin weighing evidence, be sure that you're clear about exactly what the hypothesis is, so that you put only relevant evidence into the appropriate pans.

2. **How plausible is the hypothesis?** Before you allot the evidence, assess how likely the hypothesis is based on what you already know. An approximate, qualitative estimate of its plausibility is all that's needed: is it implausible, highly plausible, somewhat plausible, or highly implausible? If the hypothesis is a plausible one, then you should add some belief weight to the pan supporting it; if it is implausible, then some weight will go in the other pan. How much weight you put in either pan will depend upon exactly how plausible or implausible you judge the hypothesis to be[2].

   Don't rate the hypothesis as certainly true or false[3]. It's okay to rate it extremely plausible or extraordinarily unlikely, but always leave open the possibility that the evidence might cause you to change your mind.

Otherwise, you are dogmatically committed to the hypothesis, and there would be no point in trying to assess the effect of evidence upon it.

3. **How plausible is the evidence?** Having rated the plausibility of the hypothesis, also rate the plausibility of the evidence for and against it. Some evidence is more plausible than other evidence, and thus should weigh more in the scales. For instance, suppose that one piece of evidence is an eyewitness report: such a report could weigh heavily if the witness is reliable, but would weigh much less if you found reasons to doubt the witness' eyesight or honesty.

4. **Have you included all of the evidence?** Put all of the evidence into the pans of your mental scales, both the evidence in favor of the hypothesis and that against. Rule 8 asked you to consider *all* of the evidence, both positive and negative, and it's now time to put that evidence to use. To ignore the evidence against a favorite hypothesis would tend to falsely tilt the scales too far in favor of that hypothesis, which is why it's important not to leave any evidence out[4].

5. **In which direction and how far do the scales tilt?** Having considered all of the evidence and weighed that which supports the hypothesis against that which undermines it, you are now ready to adjust your belief. Remember that belief is not an all-or-nothing affair and the purpose of this exercise is to adjust your belief to the evidence. Does the evidence support or go against the hypothesis? How strongly does the evidence favor one side or the other? How do you need to adjust your belief: do you need to change its direction entirely, or just its degree?

   Finally, if the scales balance evenly, or close to evenly, don't be afraid to suspend judgment on the hypothesis. There are many hypotheses about which we do not have enough evidence to judge, and some about which we probably never will have enough. There's nothing wrong with concluding: "I don't know."

Next Month: The Final Rule

Notes:

1. **Previous entries in this series:**
   1. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
   2. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
   3. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
   4. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
   5. Rule of Argumentation 5: Be as precise as necessary!, 5/29/2019.
   6. Rule of Argumentation 6: Defend your position!, 7/7/2019.

7. Rule of Argumentation 7: Aim at objectivity!, 8/9/2019.
8. Rule of Argumentation 8: Consider all the evidence!, 9/19/2019.
9. Rule of Argumentation 9: Agree about what you disagree about!, 10/20/2019.
10. Rule of Argumentation 10: Attack or defend claims!, 11/12/2019.
11. Rule of Argumentation 11: Make your arguments relevant to claims!, 12/22/2019.

2. This is the basis for the saying, made popular by astronomer Carl Sagan, that extraordinary claims require extraordinary evidence. In contrast, ordinary claims only need ordinary evidence to support them. See: Carl Sagan, *Broca's Brain: Reflections on the Romance of Science* (1980), p. 73.
3. Only logical and mathematical statements should be believed or disbelieved with certainty. There is evidence in logic and mathematics, but the role it plays is quite different than that suggested by the scales metaphor. In the case of such a statement, there is no weighing of evidence for and against; rather, it is a theorem if and only if it can be proven. The rules of argumentation are concerned with the kind of statements and evidence that do not admit of logical certainty, which include all of the statements of empirical science and ordinary life.
4. To ignore evidence against a pet hypothesis, or to weigh the evidence less than it deserves, is what psychologists mean by "confirmation bias", that is, a bias in favor of evidence that confirms one's favored hypothesis.

Rule of Argumentation 13:
Think for Yourself!

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February 24th, 2020

> The motto of enlightenment is…: *Sapere aude!*
> Have courage to use your own understanding![1]

To end this series of rules, I want to return to something I quoted at the end of the first one: "Sapere aude!", which I translate as: "Dare to think for yourself!" I quote this again at the end because, if you do your best to follow the previous rules you will have earned the right to think for yourself, that is, to make up your own mind about what you have thought about.

If you have appealed to reason[2] and were ready to change your mind based on it[3], focused on claims and arguments rather than those you argue with[4], made your claims as definite as possible[5] and as precise as necessary[6], defended your position when challenged[7], did your best to be objective[8] by considering all the evidence[9], pursued agreement about the focus of your disagreement[10], attacked and defended claims instead of people[11], used relevant arguments[12], and proportioned your beliefs to the resulting evidence[13], then you have every right to your opinion. Have the courage of your well-earned convictions!

The phrase "Sapere aude!" comes from philosopher Immanuel Kant's essay "What is enlightenment?" There, Kant explains:

> Enlightenment is man's emergence from his self-incurred immaturity. Immaturity is the inability to use one's own understanding without the guidance of another. This immaturity is self-incurred if its cause is not lack of understanding, but lack of resolution and courage to use it without the guidance of another. … Laziness and cowardice are the reasons why such a large proportion of men…gladly remain immature for life. For the same reasons, it is all too easy for others to set themselves up as their guardians. … The guardians who have kindly taken upon themselves the work of supervision will soon see to it that by far the largest part of mankind (including the entire fair sex) should consider the step forward to maturity not only as difficult but also as highly dangerous. … Thus it is difficult for each separate individual to work his way out of the immaturity which has become almost second nature to him. He has even grown fond of it and is really incapable for the time being of using his own understanding, because he was never allowed to make the attempt.…[1]

Now, I'm not suggesting—and I don't think Kant was, either—that you should go to the "University of Google" or spend a few minutes reading an article on *Wikipedia*, and then dare to think for yourself about quantum mechanics, or even bicycle repair. No, I'm talking about doing your due diligence, which includes the twelve steps that I have outlined throughout this series. But it also means learning whatever background information or skills you need to have an informed opinion on a subject. When you're ignorant, admit it, most of all to yourself. As I mentioned at the end of the previous lesson, don't be afraid of these three one-syllable words: I don't know!

Of course, as a human being you have the moral and, hopefully, legal right to think for yourself. But not only do you have such a right, you have a duty to do so if you are a citizen of a free republic who has a say in how the government is run[14]. As Kant went on to write:

> For [public] enlightenment…, all that is needed is freedom. And the freedom in question is the most innocuous form of all—freedom to make public use of one's reason in all matters. But I hear on all sides the cry: Don't argue! The officer says: Don't argue, get on parade! The tax-official: Don't argue, pay! The clergyman: Don't argue, believe! … All this means restrictions on freedom everywhere. … The public use of man's reason must always be free, and it alone can bring about enlightenment among men….[1]

Why do I need a rule encouraging you to think for yourself? Who is going to think for you if you refuse to do so for yourself? The answer is, obviously, someone else, namely, those people that Kant refers to as "the guardians". They will gladly think for you, but who will think for them? In the end, some will have to think for themselves, so why not you?

There are two reasons why people fail to think for themselves:

1. **The Desire to Conform:** Human beings are social animals, and the desire to fit in to your tribe can be strong. You may be tempted to follow the leader, or follow the herd, letting others think for you instead of doing it yourself. It can be easier to drink the Kool-Aid, even if you know that it will kill you, than to refuse it when everyone else is drinking it[15].

2. **The Danger of Non-conformity:** There will be those who will attempt to trick you or intimidate you into thinking as they do, who will use lies and propaganda, or threats and even force to do so. If you don't drink the Kool-Aid voluntarily, they may try to make you drink the hemlock, instead.

It's because of your strong desire to be accepted socially, together with the danger you may face for not conforming, that it may well take courage to think for yourself. Hence, Kant's *aude*, the Latin word for "dare", from which we get our English words "audacity" and "audacious". So, have the audacity to think for yourself!

Of course, I'm not asking you to think for yourself just on my say-so, or even on Kant's say-so—that would be paradoxical! I'm just asking you to think about it.

Notes:

1. Immanuel Kant, "An Answer to the Question: 'What is Enlightenment?'", 9/30/1784. For the Latin phrase "sapere aude", see: Eugene Ehrlich, *Veni, Vidi, Vici: Conquer Your Enemies, Impress Your Friends with Everyday Latin* (1995).
2. Rule of Argumentation 1: Appeal to reason!, 12/14/2018.
3. Rule of Argumentation 2: Be ready to be wrong!, 1/26/2019.
4. Rule of Argumentation 3: Focus on claims and arguments!, 2/13/2019.
5. Rule of Argumentation 4: Be as definite as possible!, 3/8/2019.
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11. Rule of Argumentation 10: Attack or defend claims!, 11/12/2019.
12. Rule of Argumentation 11: Make your arguments relevant to claims!, 12/?/2019.
13. Rule of Argumentation 12: Proportion your beliefs to the evidence!, 1/21/2020.
14. If you are not then your human rights are being violated.
15. See: Chris Higgins, "The 35th Anniversary of the Jonestown Massacre", *Mental Floss*, 11/8/2012.