

VELOCITY TEST PREP



YOUR LOGICAL  
REASONING  
FLAW  
TYPES

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# FLAW PATTERNS

Flaw types are among the strongest patterns on the test. We can usefully divide flaw types into three groups: Some errors you *must* know - they appear with frequency on every test section, and to be successful, you will certainly want to be able to recognize these errors on sight, without having to engage in any analysis. Other errors, however, occur less frequently. These include the Should-Know Flaws - flaws that aren't as abundant as those Must-Knows, but that recur often enough that the serious test-taker should recognize them - and a handful of lesser flaws, which we'll call Know-the-Name. Arguments do not often employ these Know-the-Name flawed methods of reasoning, but they do pop up with some frequency as bad answer choices. You may want to know these in the interest of knowing when they aren't the right answer.

And here are the three categories, numbered roughly in order of the frequency with which they appear:

MUST-KNOW	SHOULD-KNOW	KNOW-THE-NAME
1. Causal Flaw	6. Analogy Error	12. Absence of Evidence
2. Bait + Switch	7. Sampling Flaw	13. Equivocation Error
3. Ascriptive Error	8. Sufficient/Necessary	14. Circular Reasoning
4. Prescriptive Error	Conflation	
5. False Choice Flaw	9. Proportion Confusion	
	10. Ad Hominem Fallacy	
	11. Part-to-Whole Flaw	

Please note that common flaw types are not committed solely when we are asked to identify flaws. Common flaw types recur on all sorts of questions: Chiefly, when we're asked for flaws, for necessary assumptions, for sufficient assumptions, and to weaken or strengthen arguments, but they also can pop up in Method, Role, and Parallel questions too.

OK. Let's do this:

# MUST-KNOW FLAWS

## 1. THE CAUSAL FLAW.

The causal flaw is the assumption of cause. It is by far the most commonly-occurring type of logical fallacy appearing on the test. [Warning: pun ahead] In practice, it exhibits itself through some combination of three major assumptions: First, that the supposed causal condition does not exist in only a correlated relationship to the supposed effect, second, that the occurrence of the factors does not allow the possibility of some alternate cause, and third, that the relationship between the two events is not one of reverse causality from that supposed. We can say then that the causal flaw gets tied up in nots: Not correlation, Not any other cause, and Not reverse cause (we told you the pun was coming).

In sum, the Causal Flaw is the assumption that the relationship described in the argument is: 1. Not simple correlation; 2. Not some other cause, and; 3. Not reversed causality.

## 2. THE BAIT + SWITCH.

The Bait + Switch is the classic con job performed by hucksters, buskers, and TV ads from time immemorial. It's what happens when you start an argument by offering evidence about Thing A, and then end it by trying to claim a conclusion about Thing B.

Example:

*Marvin will probably always be able to find willing dance partners. After all, Marvin is a math major.*

WHAT?! What does being a math major even have to do with obtaining dance partners? THE TWO THINGS HAVE NO RELATIONSHIP! YOU JUST ASSUMED THEY WERE RELATED! GAAAAH.

Sorry. We get a little worked up about these things. Anyway, the B+S baits the hook with evidence about this thing over here, and then switches to a conclusion about that thing over there. The Bait + Switch is the assumption (without providing justification!) that the evidence has any relationship to the conclusion.

### 3. THE ASRIPTIVE ERROR.

This flaw exhibits itself in those arguments in which the author attempts to refute some claim. Arguments of this type most often begin with an attribution ("Some people think...", or "It has often been said that..."). In these arguments, the flaw is in the author's basic assumption that her evidence matters – like, *at all* – to the position she's challenging. The flaw is the introduction of evidence that has no direct bearing on the issue at hand. In short, the Ascriptive Error lies in the assumption that the refuting evidence matters. It's a version of the Bait + Switch!

### 4. THE PRESCRIPTIVE ERROR.

This flaw is, simply, the assumption that the solution the argument endorses will actually work. Virtually without exception, arguments on the LSAT that purport to solve a dilemma, or that put forth a prescription for further progress in any arena, do so *without supplying any evidence* that their proposed solutions or courses of action would actually solve the problems they were intended to fix, or that they would avoid the deficiencies of the processes they were intended to replace. This is a problem. In essence, the Prescription Flaw is the assumption that the prescription works.

### 5. THE FALSE CHOICE.

Any time an argument presents you with options and then chooses between them, that argument is making a false choice, *unless you are specifically told that you have been presented with all the possibilities*. The false choice flaw is the assumption that there are no other options to consider.

### Example 1:

*I want to build a nice house for my family. However, I cannot build with wood (TERMITES) and I cannot build with concrete (so. heavy. too. heavy), so I will build my family a nice house made of mozzarella sticks.*

Wait. What in the everlasting hell is the problem with you, man? Mozzarella sticks? This is argumentation by enumeration, and even if you can't build with wood or concrete doesn't mean your only choice left is appetizers. To settle on any choice without showing us that it's the actual last option is to present a false choice.

### Example 2:

*Mountain Jim's Stick Polishing and Gentlemen's Haberdashery has just exchanged their old machine-polish operational system for a new, more environmentally-friendly hand-polishing program. However, the new hand polishing regime will result in 50% higher wages for Mountain Jim's employees, which means Mountain Jim's Stick Polishing and Gentlemen's Haberdashery will be unable to continue to turn a profit.*

This particular semantic content is quite common: the argument has claimed a conclusion about profits based on only one side of the ledger—knowing that costs went up doesn't tell us anything about profit, unless we also know something about revenue. To base a conclusion on only half of the equation is to commit a version of what we will call the False Choice error—we're making a claim without considering whether we've been given all the options.

# THE SHOULD-KNOW FLAWS

## 6. THE ANALOGY ERROR.

This one looks pretty much as you'd figure it would. It can happen any time two things are compared (peanut butter and Nutella, logic and physics, the past and the present, so on and so forth), and it's the assumption that the two things being compared are substantively similar in a way that is relevant to the argument.

Many good teachers commit this flaw egregiously and repeatedly. We're constantly telling our students, for example, that doing homework is like learning to bowl. We'll say that in bowling, dedicated, focused practice pays dividends that simply rolling a ball down a lane without thought could never pay. We'll say that if there's a problem with your approach, you won't fix it by using the *same* approach *lots of times*.

The thing is, doing LSAT homework is not necessarily enough like bowling to allow us to prove any conclusion about the one on the basis of the other. To simply put forth the claim that one's approach to the LSAT should mirror one's approach to the foul line in a bowling alley is to commit the fallacy of assuming a likeness where none has been established.

Fortunately for us (and, we suppose, for our students), a person could get by with this last flaw if s/he weren't trying to *prove* anything. That is to say, a well-put analogy can make for a pretty compelling argument, even if it isn't logically valid. The trick, then, is learning the difference between what compels and what coheres.

In short, the Analogy Flaw is simply the assumption that the things being compared are analogous.

## 7. THE SAMPLING FLAW.

Two basic assumptions arise when arguing from a sample size (that rhymed. We're sorry); first, that the sample is representative, and second, that the sample or study is relevant. The first assumption is fairly straightforward; pooling the opinions of a sample group can only ever be pertinent if we first know that the sample group actually represents the population at large. Many arguments will not establish the representative-ness of the sample populations they study, but to be useful, a sample *must* be demonstrated to be representative.

The second assumption can be subtler, but is most often played out in this manner:

*In a study of orangutan populations, after six weeks of watching The Daily Show with Jon Stewart, a great majority of the orangutans studied were able to successfully identify blowhard-isms correctly over 72% of the time when spoken by members of the American Congress. Therefore, we are pretty safe in concluding that The Daily Show with Jon Stewart could help most people to spot a blowhard.*

Weeeeell... This argument is obviously riddled with flaws, but let's concentrate on the significant sampling errors. There's the obvious problem with *representative-ness* – can a study of orangutans be applied to humans? – but there's also the question of *relevance*.

In this case, we've made a claim based on evidence of the animals' abilities after watching The Daily Show, but in order for that evidence to have any meaning, we would have to know how well the animals

were able to spot blowhards *before* they began watching the show. If it turned out that the orangutans were able to spot a blowhard 91% of the time before they started the study, then the study might actually indicate that The Daily Show makes orangutans *less* able to spot a blowhard.

In summation, the Sampling Flaw, on the LSAT, lies in the assumptions that the sample population is representative, and/or that the study gives the relevant information.

## 8. THE SUFFICIENT/NECESSARY CONFLATION.

The flaw we'll describe here can look like a variation of the causal flaw, but it has roots of a different color (yes. Like Courtney Love does).

Example:

*Timothy has discovered that, in order to become successful with the ladies, a potential suitor must own a car. Timothy has not, up to now, owned a vehicle. Furthermore, it is the case that anyone wishing to buy a car must have a solid credit rating. Wishing to become more successful with the ladies himself, Timothy has recently decided to purchase a 1992 Nissan Sentra. On the basis of this information, we can now safely conclude that if there is no problem with Timothy's credit, he will soon be more successful with the ladies.*

Well, you tell us: how much of a splash will Timothy make in his '92 Sentra?

The arguer established that owning a car was necessary to success with the ladies, but went wrong when he mistook that necessary condition for a precursor to success - clearly, owning a car is not enough, by itself, to guarantee success in Timothy's endeavor. This argument mistook a necessary condition - automobile ownership - for a sufficient condition. This is one way to commit the Suff/Nec conflation. [Extra points to anyone who sees the second commission of the same flaw in this argument.]

The Sufficient/Necessary conflation is the flaw of assuming that a sufficient condition is the same as a necessary condition, or vice versa.

## 9. THE PROPORTION CONFUSION.

Benjamin Disraeli may have first said it, Mark Twain certainly made it famous, and we cannot improve upon it: There are three kinds of lies - lies, damned lies, and statistics.

On the LSAT, if an argument feeds you numbers, it is in order to hurt you. Specifically, arguments on the LSAT tend to commit statistical errors in the



following manner: They base conclusions about raw, real numbers on evidence about percentages, proportions, or ratios.

Consider this example:

*Ten years ago, 92% of Internet users connected to the web using a dial-up modem. Now, however, only 41% of Internet users make use of such a connection. It is clear, therefore, that the number of Internet users employing dial-up modems has dropped significantly over the last decade.*

Yeah, but... only if we know that the total number of Internet users hasn't changed significantly in that time. If you told us that over the past ten years, Internet users have grown tenfold in number, then our conclusion above would be pretty ridiculous, right?

[Quick math:  $0.92(n) < 0.41(10n)$ ].

In a nutshell, the Proportion Confusion is the assumption that a percentage means the same thing as a raw number.

## 10. THE AD HOMINEM FALLACY.

We take the name of this flaw from the Latin *argumentum ad hominem*, or "argument to the person." We use this term to describe the fallacy of attempting to attack (or, sometimes, to defend) an argument by appeal to some aspect of an arguer's character or person, rather than her argument, proper.

For example:

*Tom Tancredo is a bigoted imbecile. Therefore, his argument that we should preempt any future Al Qaeda terrorist activity by threatening to direct retaliatory nuclear attacks against Mecca and Medina is an untenable position.*

Stipulating the truth of the evidence, we'll notice that this argument's conclusion is pretty persuasive; that the US should not obliterate Mecca and Medina in response to a violent action by a fringe radical group of Muslims is

a compelling argument. However, it is still logically flawed to draw any policy conclusion on the basis of Tom Tancredo's prejudiced and/or stupid mind.

We may argue that a blow to an Islamic holy city doesn't appropriately address the source of the terrorist problem. We might submit that such an attack would likely be the irrevocable step toward a final global nuclear war (with Jerusalem almost certainly the target of a nuclear retaliation, followed nearly inevitably by counter-attacks on Tehran and Beirut and Riyadh, and so on). We could argue that striking at Mecca and Medina would constitute an act of war against a civilian society that had not acted first, and that to do that is much the same as to attack a civilian New York City skyline with airplanes.

There are many reasons we may conclude that possible future terrorist activity should not be met with nuclear attacks on Mecca and Medina, but the (stipulated) fact of Tom Tancredo's dogmatic soft-mindedness is not one of them. To base any conclusion about Tancredo's argument on the grounds of his moral failing is to commit the *ad hominem* flaw.

We could commit a version of this fallacy in reverse, by the way:

*But Tom Tancredo has been elected by the voters of Colorado's 6th district to represent them in the Congress no fewer than four times over! Surely we should listen to someone with that kind of track record.*

Just as Tancredo's alleged idiocy is not an argument against his conclusion, so too are details of his biography not arguments in support of his conclusion.

To commit the *ad hominem* fallacy is to direct an argument at a person's character or personal life rather than at the person's argument.

## 11. THE PART-TO-WHOLE FLAW.

This fallacy is a version of the analogy assumption; it's the unfounded conclusion that an attribute that's true of a whole is also true of each of its component parts, or, conversely, that something that is true of the parts of a thing (even all the parts of a thing) is also true of the whole.

Take an argument:

*As chairman of one of the world's foremost technology companies, Xavier took great care in selecting a group of the finest minds in software engineering when forming a new information-management team. In fact, all of the people he hired in creating this new team were the best-qualified, most-experienced, and most talented in their fields. In this way, Xavier has guaranteed that he has formed the finest information- management group possible.*

Well, maybe. Then again, it's possible that a group constructed of only the best and brightest might not work well enough together to get much done. Or that such a team might not be able to agree on goals and on a proper methodology for achieving them. Or whatever. The point is that having all of the best pieces doesn't necessarily mean you'll have the best whole. To assume that you will is to assume that the same rules that apply to each part also apply, in the same manner, to the whole (hence the analogy component of this flaw).

The Part-to-Whole Flaw is the assumption that what is true of the parts of a whole is also true of the whole, or vice-versa.

# KNOW-THE-NAME

## 12. THE ABSENCE OF EVIDENCE FLAW.

This name implies, in our usage of it, something more than simply a lack of evidence on the arguer's part. Specifically, the Absence of Evidence flaw is the assumption that the failure to prove a claim constitutes a denial of that claim. Or, writ cute: An absence of evidence does not imply an evidence of absence.

How's about an example?

*Several previous studies purporting to demonstrate a connection between eating ice cream and gaining weight have recently been shown to have been seriously flawed in their methodologies; one, for example, neglected to control for exercise behavior. Since these studies formed the only rationale for the belief in a causal connection between ice cream consumption and weight gain, and since all of these studies have now been demonstrated to be flawed, we can at this juncture definitively state that there is no real connection between eating ice cream and putting on weight.*

See what happened there? We demonstrated an absence of evidence regarding the connection between ice cream and portliness, then we mistook that lack of evidence for evidence opposing the connection. The thing is, this absence of evidence does not - nor could it ever - indicate evidence that there is no connection between the two, and it is a logical fallacy to assume otherwise.

To return and put a fine point on it, the Absence of Evidence flaw is the assumption that a lack of proof for a claim constitutes denial of the claim.

## 13. THE EQUIVOCATION ERROR.

To equivocate is to waffle. Politicians are particularly prone to permitting this pernicious problem to penetrate their palaver. Equivocation, used generally, carries with it the sense of intentional prevarication; a use of language in a

shifty way in order to allow an ambiguity in meaning. More specifically, on the LSAT, to equivocate is to refuse to commit to one specific meaning of a term or phrase in an argument, and to prey upon that shift in meaning.

Example:

*Some people have argued that Mother Teresa was not a rich woman, but they failed to recognize that she had a wealth of kindness, a great storehouse of wisdom, and an incredible bounty of spirit. Thus, it is far more correct to conclude that Mother Teresa was a rich woman.*

See how the argument allowed the important word “rich” to slip in meaning between “having lots of money” and “having lots of great attributes?” That’s equivocation at work.

The equivocation error can be said to be the assumption that all words have only one meaning, even while using one of them in two different senses.

## 14. CIRCULAR REASONING.

Like a snake eating its tail, the circular flaw is an argument that simply turns back on itself for support. It’s important to note that this flaw is not actually committed with any regularity on the LSAT, but its name pops up often enough in answer choices to merit sufficient attention that we can recognize it (even if only to say to ourselves, “This reasoning, though flawed, is not circular.”).

It is pretty much just what it sounds like, but we’ll present an example:

*Anyone who wants to do well in law school has to study hard. This is clear from the fact that studying hard is necessary to success in law school.*

Yup. This is a flaw because it isn’t an argument at all. It’s simply saying a thing twice in the hope that if the first time didn’t convince you, the second one will.

The circular flaw is the error of presenting as a conclusion nothing more than a restatement of the evidence offered to support it.

# HOW LSAC COMMONLY DESCRIBES TYPICAL FLAWS IN ANSWER CHOICES

## MUST-KNOW FLAWS

### Causal

*"The argument treats one of several plausible explanations for a phenomenon as though it were the only possible explanation."*

### Bait + Switch

Look for very text-specific answer choices: *"Presumes without providing justification that [evidence X] does in fact [address the issue of the argument]"*

### Ascriptive [A version of Bait+Switch]

Like the above: Look for very text-specific answer choices: *"Presumes without providing justification that [evidence X] does in fact [address the issue of the argument]"*

### Prescriptive

Again, look for very text-specific answer choices: *"Presumes that [the prescription] would, in fact, [solve the problem the passage addresses]"*

### False Choice

*"The argument fails to consider whether there are some cases [other than those mentioned in the passage]"*

## SHOULD-KNOW FLAWS

### Analogy

*"The argument relies on a comparison that may not hold across cases."*

### Sampling Error

*"The argument bases a generalization on a sample that may not be representative"*

### S v N

*"The argument assumes that a condition sufficient to ensure a result is required in order to bring about that result"*

or

*"The argument confuses a condition required for a state of affairs to hold for a condition sufficient to bring about that state of affairs"*

### Proportion Confusion

*"Moves from evidence about the current percentage of [thing X] to a claim about the amount of [thing X]"*

### Ad Hominem

*"The argument criticizes the source of a claim rather than examining the claim itself"*

### Part/Whole

*"Presumes that what is true of the constituent elements of a whole is also true of the whole" (part-to-whole)*

or

*"Presumes that what is true of a whole is also true of its constituent elements" (whole-to-part)*

## KNOW-THE-NAME FLAWS

### Absence of Evidence

*"Infers the truth of a claim from the fact that the claim has not been proven false."*

### Equivocation

*"Equivocates with respect to a key concept,"*

*or*

*"Allows a key term in the argument to shift in meaning."*

### Circular

*"The argument presupposes what it sets out to establish."*