



ALTERNATE CAUSE – A WEAKENER OR NOT

An e-GMAT Primer



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INTRODUCTION

Almost all of us would have heard of causal arguments and most of us would also know the common weakener categories for such arguments. For example: one of the common weakeners is the one which suggests an alternate cause for the effect. Still, at times, we find that these common weakener categories don't work.

The purpose of this article is to understand where these weakener categories don't work and find out why.

EXERCISE

Before we begin, here is a small exercise for you consisting of three OG questions. Here, you have the question along with only one option statement and you need to find out if that option statement is a valid answer or not. A diligent attempt at the quiz will help you get the maximum out of this article.

1. *Journalist: In physics journals, the number of articles reporting the results of experiments involving particle accelerators was lower last year than it had been in previous years. Several of the particle accelerators at major research institutions were out of service the year before last for repairs, so it is likely that the low number of articles was due to the decline in availability of particle accelerators.*

Which of the following, if true, most seriously undermines the journalist's argument?

Recent changes in the editorial policies of several physics journals have decreased the likelihood that articles concerning particle-accelerator research will be accepted for publication.

2. *A study of marital relationships in which one partner's sleeping and waking cycles differ from those of other partner reveals that such couples share fewer activities with each other and have more violent arguments than do couples in a relationship in which both partners follow the same sleeping and waking patterns. Thus, mismatched sleeping and waking cycles can seriously jeopardize a marriage.*

Which of the following, if true, most seriously weakens the argument above?

Married couples in which both spouses follow the same sleeping and waking patterns also have arguments that can jeopardize the couple's marriage.

3. *12 years ago and again 5 years ago, there were extended periods when the Darfir Republic's currency, the pundra, was weak: its value was unusually low relative to the world's most stable currencies. Both times a weak pundra made Darfir's manufactured products a bargain on world markets, and Darfir's exports were up substantially. Now some politicians are saying that, in order to cause another similarly sized increase in exports, the government should allow the pundra to become weak again.*

Which of the following, if true, provides the government with the strongest grounds to doubt that the politicians' recommendation, if followed, will achieve its aim?

A sharp improvement in the efficiency of Darfir's manufacturing plants would make Darfir's product a bargain on world markets even without any weakening of the pundra relative to other currencies.

The answer for the quiz is that only in the first argument is the given option statement a valid answer. If you did all the three questions correctly, good job 😊

If, in either question 2 or 3, you marked the option statement as a valid answer choice or found it very attractive, this article will help you understand where you went wrong and why.

UNDERSTANDING THE CONCLUSION

Let's look back at three arguments and find out their conclusion statements.

Argument	Conclusion
1	It is likely that the low number of articles was due to the decline in availability of particle accelerators
2	Mismatched sleeping and waking cycles can seriously jeopardize a marriage.
3	In order to cause another similarly sized increase in exports, the government should allow the pundra to become weak again

Here, I'll just reword each of the conclusion statements, without obviously changing their meaning, so that we can use them directly for our analysis.

The three conclusion statements can be rewritten as:

Argument	Conclusion
1	Decline in availability of particle accelerators led to the low number of articles
2	Mismatched sleeping and waking cycles can lead to seriously jeopardizing a marriage.
3	Weak pundra will lead to similarly sized increase in exports

If we look at the conclusion statements carefully, we'll observe that:

1. The first conclusion is of the type: X led to Y. In this conclusion type, we are trying to tell the reason which led to the occurrence of Y. So, obviously Y, an event or occurrence or process, has happened in the past and X, which we say led to Y, must also have happened in the past and before Y occurred.
2. The second and the third conclusions are of the type: X can/will lead to Y. Unlike the first type, here we are not explaining the reason for something that happened in the past. Y may or may not have happened in the past. In this conclusion, we are either presenting a generic case that X can lead to Y or a future prediction that X will lead to Y. The reason for clubbing these categories will become clear as we go through the article.

Now, let's identify the elements X and Y for each of the conclusion statements:

In the first conclusion, we have

Argument	Type	X	Y
1	X led to Y	Decline in availability of particle accelerators	Low number of articles
2	X can/will lead to Y	Mismatched sleeping and waking cycles	Jeopardizing the marriage
3	X can/will lead to Y	Weak pundra	Similar sized increase in exports

Let's look at the option statements for these arguments:

Argument	Option Statement
1	Recent changes in the editorial policies of several physics journals have decreased the likelihood that articles concerning particle-accelerator research will be accepted for publication
2	Married couples in which both spouses follow the same sleeping and waking patterns also have arguments that can jeopardize the couple's marriage
3	A sharp improvement in the efficiency of Darfir's manufacturing plants would make Darfir's product a bargain on world markets even without any weakening of the pundra relative to other currencies

As we look at each of these option statements, we see that what each of these is saying is that there is an alternate cause/way, say Z, to achieve Y (the effect).

Argument	Z
1	Recent changes in the editorial policies of several physics journals
2	Arguments between married couples
3	A sharp improvement in the efficiency of Darfir's manufacturing plants

Now, when we look at these option statements and find that there is a Z which also leads to Y, we think that this existence of Z weakens both the conclusion types i.e. X led to Y and X can/will lead to Y. However, as the solutions to the OG questions tell us, that is not correct. Let's understand this.

EXAMPLE

Let's suppose the argument says that

Eating sugar leads to obesity.

Can we weaken this statement by saying that

Eating oil leads to obesity.

The answer is No.

Why? Because the author is not saying that only eating sugar leads to obesity. The author is only saying that eating sugar is one of the ways to get obese. Even from common understanding, we all know that both of these things i.e. eating sugar and eating oil lead to obesity. The fact that eating oil makes you obese has no impact on the likelihood of the fact that eating sugar leads to obesity. In other words, saying that there are multiple ways to achieve the same objective does not weaken the conclusion which only states one of the ways to reach the objective.

MODIFIED EXAMPLE

Now, Let's look at a modified version of our simple example:

If the argument says that

Eating sugar made Jon obese.

Can we weaken my statement by saying that

Eating oil made Jon obese.

The answer here is Yes. In this argument, we are essentially talking about a specific case i.e. what made Jon obese. Here, it is given knowledge that Jon is obese, what the argument or the conclusion provides is a reason that made Jon obese.

Now, when we make the above statement that Eating oil made Jon obese, we are essentially countering what the argument said. We are essentially saying that eating sugar is not the reason, rather eating oil is. We are creating significant doubt on the truth value of the argument.

At this point, can you understand how our statement did not weaken the original argument but how our statement weakens the modified argument?

The reason is that the original argument i.e. Eating Sugar leads to obesity is a generic statement that X leads to Y. In such case, saying Z leads to Y does not impact the validity of the argument.

However, in the modified argument, we are talking about a very specific event (Y: obesity of Jon) and trying to explain the reason for the same (X: Eating Sugar). In this case, saying that there is some Z (eating oil) that led to Y weakens the argument because it creates significant doubts on whether eating sugar was the reason or not.

EXAMPLE 2

Let's take one more example to understand this:

If the argument says that *Pollution can cause cancer*, then we cannot weaken this statement by saying that *UV rays can cause cancer*. The fact that UV rays can cause cancer has no impact on the statement that pollution can cause cancer.

However, if the argument says that *Joe got cancer because of pollution*, then we can definitely weaken the argument by suggesting that *Joe got cancer because of exposure to UV rays*. This is so

because here, we are trying to explain the reason for a specific event i.e. Joe getting cancer. The argument says that the reason is pollution and when we say that the reason is UV rays, we are countering and thus, weakening the argument.

REVISITING EXERCISE ARGUMENTS

With the above understanding in mind, let's bring back the exercise arguments and see if our understanding works there or not.

Argument	Conclusion
1	Decline in availability of particle accelerators led to the low number of articles
2	Mismatched sleeping and waking cycles can lead to seriously jeopardizing a marriage.
3	Weak pundra will lead to similarly sized increase in exports

ARGUMENT 1

We can see that the first argument is of the type: X led to Y (X: Decline in availability of particle accelerators, Y: low number of articles). So, the argument is trying to explain the reason which led to the occurrence of Y. The argument is talking about a specific case in the past. It says that decline in availability of particle accelerators led to the low number of particles.

The option statement for this argument says that:

Recent changes in the editorial policies of several physics journals have decreased the likelihood that articles concerning particle-accelerator research will be accepted for publication.

This statement presents an alternate cause, Z, which could have led to the low number of articles. So, what this option statement is suggesting is that probably the actual reason for low number of articles is recent changes in the editorial policies of physics journals. By suggesting this, this creates doubt and hence weakens the argument which attributed the reason to decline in availability of particle accelerators.

ARGUMENT 2

The argument 2 is of the type X can lead to Y (X: Mismatched sleeping and waking cycles, Y: jeopardizing the marriage). So, this argument is talking about a generic case that X can lead to Y. Remember, in this argument, Y has not occurred in the past and the argument is not trying to explain the reasons for its occurrence. The argument is making a generic statement that X can lead to Y.

The option statement for this argument says that:

Married couples in which both spouses follow the same sleeping and waking patterns also have arguments that can jeopardize the couple's marriage.

The statement presents an alternate route, Z, to reach the same end Y (Z: arguments, Y: jeopardizing the marriage). But just the presence of one more way to reach the end does not weaken the original argument that X can lead to Y. The argument does not say that X (mismatched sleeping and waking cycles) is the only way to Y (jeopardize the marriage). If there are other ways to do so, it does not impact the argument.

ARGUMENT 3

The argument 3 is of the type: X will lead to Y (X: Weak pundra, Y: similarly sized increase in exports) So, this argument is talking about a future case that X will lead to Y. Remember, in this argument, Y has not occurred in the past and the argument is not trying to explain the reasons for its occurrence. The argument is making a futuristic statement that X will lead to Y.

The option statement for this argument says that:

A sharp improvement in the efficiency of Darfir's manufacturing plants would make Darfir's product a bargain on world markets even without any weakening of the pundra relative to other currencies

The statement presents an alternate route, Z, to reach the same end Y (Z: A sharp improvement in the efficiency of Darfir's manufacturing plants, Y: similar sized increase in exports). Here again, just the presence of one more way to reach the end does not weaken the argument that X will lead to Y. The argument does not say that only X will lead to Y. If there are other ways to reach Y, it does not impact the argument.

TAKE AWAYS

1. "X leads/can lead/will lead to Y" allows the possibility of an alternate route, Z, to reach the effect, Y. Therefore, an option statement presenting an alternate route does not weaken this conclusion type.
2. "X led to Y" is presenting a reason (X) for a specific occurrence in the past (Y). An option statement suggesting an alternate cause, Z, led to Y, creates doubts on the conclusion and thus, weakens the argument.