1. Identifying Relevant Reasons

We have already discussed several critical thinking skills (CTS):

> CTS #1: the ability to identify passages of text and determine whether or not they are arguments,
> CTS #2: the ability to determine whether an argument is valid/invalid and strong/weak by using the imagination test.
> CTS #3: the ability to specify the *exact* conclusion of the argument.

The next CTS we will discuss is the following:

> CTS#4: the ability to identify which premises (reasons) are relevant and which are irrelevant to a specific conclusion.

2. Reasons are Relevant / Irrelevant only in Relation to a Conclusion

Reasons are not relevant in isolation. In the context of arguments, they are relevant / irrelevant only in relation to conclusions. That is, nothing is relevant or irrelevant entirely on its own, independent of a conclusion.

Example	Question
The miles per gallon a car gets is very relevant.	With respect to what?
The ethics of abortion is not relevant.	Really, with respect to what?

If a reason is relevant or irrelevant only in relation to a conclusion, it is worth noting that a reason **R** can be *relevant* in an argument relative to a conclusion C_1 but **R** can be *irrelevant* relative to another conclusion C_2. Consider the following

TWO ARGUMENTS WHERE A DIFFERENT CONCLUSION IS SUPPORTED BY THE SAME REASON

Argument #1: The heinous murder of John supports the conclusion that the defendant is guilty.

P1: John's murder was horribly gruesome. Look here at this picture of how John's limbs were brutally sawed off.
C1: Therefore, you should convict the defendant.

Argument #2: The heinous murder of John supports the conclusion that the defendant should receive a death sentence.

P1: John's murder was horribly gruesome. Look here at this picture of how John's limbs were brutally sawed off.
C2: Therefore, as the defendant has already been found guilty of murder, s/he should be sentenced to death.

Notice that in *Argument #1*, the heinousness of John's murder is *irrelevant* to whether or not the defendant murdered John but in *Argument #2*, the heinousness is *relevant* for whether or not he should receive the death penalty.

3. Determining Relevant Reasons

Determining what reasons are relevant to a conclusion is a difficult task.

> For inductive arguments, a reason / premise **R** is **relevant** if and only if it influences the likelihood of the conclusion.

We will focus on inductive arguments. Using this criterion, we can determine whether **R** is relevant/irrelevant using the following two-step process:

TWO-STEP PROCESS FOR DETERMINING RELEVANCY

Step 1   Determine the *exact conclusion* of an argument

Step 2   Determine whether a reason **R** influences the likelihood of the conclusion (e.g. does it make it or more or less likely?). If it influences the likelihood of the conclusion, then **R** is relevant. If it has no influence on the conclusion, then **R** is irrelevant.

In short, a reason is relevant to a conclusion if and only if it influences the likelihood of the conclusion. If it has no affect, then it is irrelevant.

Test Your Knowledge – Which Reasons are Relevant?

John is a really great guy. He has been practicing his free throws every day for the last year. In addition, he also got a new shooting coach, who is very good. Therefore, John will make the PSU basketball team this year.

It is important to keep in mind that in order for a reason to be *relevant*, it need not make the conclusion **_more_** *likely*. That is, a reason might be *relevant* but fail to make the conclusion follow *necessarily* or it may be relevant but may make the conclusion *less likely*.

Relevant Reason that makes the conclusion *less likely*

P1   John has *not* been practicing his free throws.
C   John is going to be a great free throw shooter this year.

A. Test Your Knowledge Exercises
Consider the following arguments and determine whether the premises are relevant or irrelevant. If the argument contains an irrelevant premise, identify it.

1. College tuition is way too high. First, many students come from families with little money and so can't afford tuition. Second, more and more tuition is going to useless programs and to university administrators. Third, the job market isn't looking too promising right now.

2. There are plenty of great health benefits to running regularly. Running is a great calorie burner that works your entire body. Building endurance can help with lung capacity and is great for your heart. It can help you lose weight or even just stay in shape.

3. If one aspect of Penn State needs to be improved, it is the CATA bus system. You can never rely on them. They created a mobile application for smart phones and tablets that lets you track where the closest bus is, but it is almost always inaccurate. CATA drivers are dangerous and often speed making passengers feel uncomfortable. Personally, I walk since walking is great exercise.

4. The last time I wore my lucky hat, Penn State only lost one game. Therefore, Penn State Football is only going to lose one game this year.

5. Your honor, there is absolutely no physical evidence to prove that my client was at the scene of the murder. No DNA has been found around the body. His fingerprints did not show up on any of the weapons used to commit the crime. And, the family of my client has testified that he was at his nephew's birthday party all night!

6. The new shopping center in State College will have a negative impact on the environment are wrong. Consider that the mall will have an in-house recycling center, will recycle all plastic used by patrons, and will generate tons of revenue for State College.

7. DASH is by far the best clothing store in the world. First, the Kardashian sisters own DASH and they have a television series. Second, the Kardashian sisters are great people with big hearts. Third, Kim Kardashian is dating the very fashionable Kanye West.

8. Sororities provide college girls with a great group of friends right away. In addition, sororities get you involved in multiple philanthropies as well. Lastly, the alumna of your respective sorority are spread nationwide, and in various fields of work. Therefore, every girl in college should join a sorority because of all the benefits they offer.

4. Irrelevant Reasons Fallacy & the Red Herring Fallacy

The **fallacy of the irrelevant reason** is a type of inference where a reason is given in support of a conclusion but this reason is *irrelevant* to the truth or falsity of the conclusion. In other words, if someone supports a conclusion with a reason that has no bearing on the truth or falsity of the conclusion, then they have committed the fallacy of the irrelevant reason.

Irrelevant reasons are commonly called **red herrings** as they distract individuals from the premises that are relevant to the evaluation of an argument. But, red herrings (and the red herring fallacy) are also applied to a broader array of cases that are not necessarily fallacious, e.g. going off on a tangent or changing the topic of discussion.

Example of the Irrelevant Reason Fallacy	
P1	A study shows that if students take critical thinking classes, they perform better on various tests that help them get into law school.
P2	Michael Jordan is the greatest basketball player ever and he took a critical thinking class
C	Therefore, all students should take critical thinking courses to help them get into law school.

Assume that **P1** is true. Does this make C more or less likely? Yes, it makes it more likely. Now assume that **P2** is true. That is, assume that Michael Jordan is a great basketball player and has taken a critical thinking course. Does this make it more or less likely that a course in critical thinking will help you get into law school? Certainly not, Michael Jordan likely took many courses while in college, but his taking the course does not have anything to do with one's likelihood of getting into law school. So, even if **P2** is true, it does not influence the likelihood of the conclusion and so **P2** is the red herring.

However, **P2** may have an effect on our willingness to accept **C**. When we hear that Michael Jordan (or any successful person) took a critical thinking course, we may inadvertently associate some of Michael Jordan's success in basketball with his taking critical thinking course. Once this connection is made, we then generalize that critical thinking courses help individuals become more successful in general (or at least in other areas). Finally, we make the leap to say that taking a course in critical thinking course will help with law school preparation.

Expanded of the Irrelevant Reason Fallacy

P1	A study shows that if students take critical thinking classes, they perform better on various tests that help them get into law school.
P2	Michael Jordan is the greatest basketball player ever and he took a critical thinking class
P2.1*	A critical thinking course helped Michael Jordan become successful.
P2.2*	A critical thinking course will help other people become successful in other areas.
C	Therefore, all students should take critical thinking courses to help them get into law school.

Irrelevant reasons have persuasive power. **First**, we generally assume that when someone offers a reason for a conclusion that reason is *relevant* to the argument. We assume that people are polite and don't wish to waste our time by posing arguments supported with irrelevant reasons. Thus, we grant people the benefit of the doubt, assume that the reasons they offer for their conclusion are relevant, and credit this reason in our overall evaluation of the argument.

1	My budget plan balances the budget, reduces debt, and lowers taxes.
2	My opponent's plan is terrible and, by the way, did you hear he was arrested last weekend?
3	Therefore, any voter with any intelligence will vote for my budget plan.

Notice that premise 2 distracts you from the central point, namely why *John's plan* is terrible. It instead shifts the focus away from a criticism of John's plan to balance to a criticism of *John* as a person. In assuming that a criticism of John is relevant to the overall evaluation of the argument, one may be fallaciously be led to believe that John's arrest impacts the overall quality of his plan to balance the budget.

Second, a reason can be *irrelevant* but be *true*, and the quality of an argument is often *credited* when it has *reasons* that are *true*. However, note that an argument can have true premises but these premises do not make the conclusion more or less likely. That is, an argument can have true premises but fail to be strong. Consider the following argument:

1	John's murder was horribly gruesome. Look here at this picture of how John's limbs were brutally sawed off.
2	Therefore, you should convict the defendant.

The fact that John was gruesomely murdered does not mean that the defendant murdered John but citing that *true* premise may lead someone to fallaciously credit the argument that the defendant should be convicted.

Classroom Discussion Activity

Take a look at the case of Reid on p.80 and consider whether the reasons are *relevant* or *irrelevant* (you may need to re-read pp.77-79).

instructor notes

Notes on Reid's Case

X is guilty of felony possession of a firearm if and only if (i) X has been convicted of a previous felony, (ii) X possesses a gun, and (iii) X knows s/he possesses a gun

Two Different Conclusions:
C1: X is not guilty since the law above is unjust.
C2: X is guilty since evidence shows (beyond a reasonable doubt) that X meets conditions (i)–(iii).

A reason may be relevant to one conclusion but not the other.
- X is harmless?
- X was not aware that X was breaking the law?
- X was good intentioned?

Question: What are the jury members really arguing about on p.78?