Charta | LESSON NOTES

Weaken questions: find another story

Verbal Reasoning

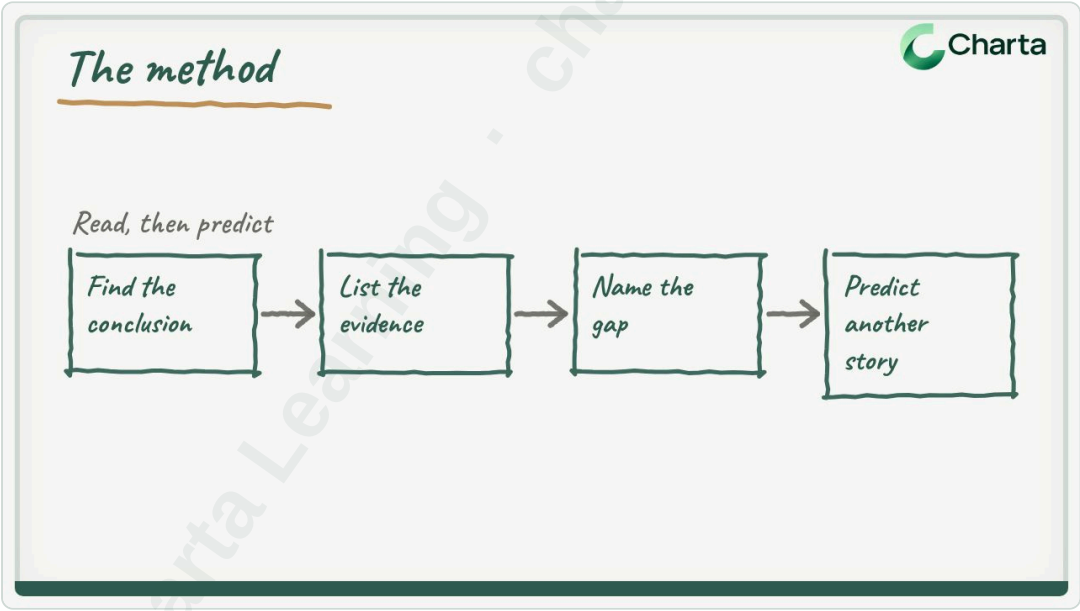
1 What the question asks

- Question line: if true, most seriously weakens
- Accept every choice as true
- It need only make the conclusion less likely
- Attack the jump, not the facts given

IN THE LESSON

- The question line says something like, which of the following, if true, most seriously weakens the argument, or, casts the most doubt on the conclusion.
- As with strengthen questions, accept every choice as true.
- Do not argue with a choice because it seems unlikely.
- And the right answer does not have to destroy the argument.
- It only has to make the conclusion less believable than any other choice does.
- One more thing: you weaken the reasoning, not the evidence.
- The facts in the argument are given.
- A choice that simply says the evidence is wrong is not how these questions work.
- You attack the jump from the facts to the conclusion.

2 The method



IN THE LESSON

- The method is the same four steps you know.
- Step one, find the conclusion: ask why should I believe this.
- Step two, list the evidence.
- Step three, name the gap, the jump the author makes.
- Step four, predict what would widen that gap, before you read the choices.
- For a weaken question the prediction is often a rival explanation: something else that could explain the evidence.
- If you can tell another story that fits the facts just as well, you have weakened the conclusion.
- So, before you read the choices, ask yourself: what else could have caused this?
- Then look for a choice that gives that other cause.

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3 Four ways to weaken a cause

- 1. Another cause changed at the same time
- 2. Unfair groups: different from the start
- 3. The effect happened without the cause
- 4. A broken mechanism

IN THE LESSON

- When the conclusion says A caused B, here are four ways a choice can weaken it.
- One, another cause: something else changed at the same time and could explain B.
- Two, unfair groups: the groups being compared were different from the start, so the difference is not due to A.
- Three, the effect without the cause: B happened just as much where A was absent.
- Four, the cause without the effect, or a broken mechanism: A happened but the route by which it should work did not.
- You will see the first, second and third in this lesson.
- Notice that these are exactly the strengthen tools, turned around.

4 The traps in the wrong choices

- It strengthens: relevant, but the wrong way
- Off topic: same subject, not the cause
- Too weak: an exception already allowed
- A note on method that offers no rival

IN THE LESSON

- Now the traps.
- The first, and the most common, is the opposite direction: a choice that strengthens the argument.
- It is relevant, so it feels right, but it pushes the wrong way.
- The second is off topic: a fact about the same subject, such as how much electricity the lights use, that has nothing to do with the cause.
- The third is too weak: an exception the argument already allows, such as some seedlings survived.
- A claim that deer reduce seedlings is not hurt by a few survivors.
- The fourth is a fact about method, such as how things were counted, that gives no rival explanation.
- For each choice, ask: does it give another story, and which way does it push?

5 Question 1: brighter streetlights

- Last year the city of Halford replaced the streetlights in its Northgate neighborhood with much brighter ones. In the following year, the number of nighttime burglaries reported in Northgate fell by 25 percent. The police chief concludes that the brighter lighting discouraged burglars.
- Which of the following, if true, most seriously weakens the argument?

IN THE LESSON

- Question one is an easy one.
- Read it with me.
- Last year the city of Halford replaced the streetlights in its Northgate neighborhood with much brighter ones.
- In the following year, the number of nighttime burglaries reported in Northgate fell by twenty five percent.
- The police chief concludes that the brighter lighting discouraged burglars.
- The question: Which of the following, if true, most seriously weakens the argument?
- What else could explain the fall?

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6 Question 1: what else changed?

Northgate: brighter lights, then a quarter fewer burglaries

Conclusion	the lights deterred burglars	**the claim**
Evidence	burglaries fell after the lights	**after**
Gap	after is not because	**the gap**
Prediction	another change that year	**another cause**

IN THE LESSON

- The conclusion: the brighter lighting discouraged burglars.
- The evidence: after the new lights went in, night time burglaries fell by a quarter.
- The gap is a familiar one.
- One thing followed another, and the chief says the first caused the second.
- To weaken, tell another story.
- What else could make burglaries fall in the same year?
- More police, a burglar caught and locked up, new locks on doors, or a fall in burglary across the whole city.
- Any of these would explain the facts without the lights.
- So predict: another change that year that could cut burglaries.
- We do not know which one the test will use, but we know the shape: another cause.

7 Question 1: the five choices

- A. The new streetlights in Northgate use less electricity than the ones they replaced.
- B. That year the police doubled their nighttime patrols in Northgate.
- C. In a survey, Northgate residents said they felt safer walking outdoors at night under the new lights.
- D. Before the change, most burglaries in Northgate took place on its most poorly lit streets.
- E. Burglars in Northgate target homes more often than they target shops or offices.

IN THE LESSON

- Here are the five choices.
- Choice A.
- The new streetlights in Northgate use less electricity than the ones they replaced.
- Choice B.
- That year the police doubled their nighttime patrols in Northgate.
- Choice C.
- In a survey, Northgate residents said they felt safer walking outdoors at night under the new lights.
- Choice D.
- Before the change, most burglaries in Northgate took place on its most poorly lit streets.
- Choice E.
- Burglars in Northgate target homes more often than they target shops or offices.
- Which one is another cause?

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8 Question 1: test each choice

Prediction: another change that year could explain the fall

A: the lights use less power	energy is a side issue	**off topic**
B: police patrols doubled	another cause of the fall	**weakens**
C: residents feel safer	feelings do not explain the fall	**off topic**
D: burglaries on dark streets	links darkness to burglary	**strengthens**
E: homes targeted more than shops	type of target is irrelevant	**off topic**

IN THE LESSON

- Choice A is about electricity, a side issue that tells us nothing about burglars.
- Choice B matches the prediction.
- If the police doubled their night time patrols that same year, the patrols could explain the fall in burglaries, with or without the lights.
- That is another cause, so B weakens the chief's conclusion.
- Choice C says residents feel safer.
- Feeling safe does not explain why burglaries fell.
- Choice D is the opposite direction trap.
- If most burglaries used to happen on the darkest streets, darkness and burglary go together, which supports the lights.
- Choice E, homes versus shops, has no bearing on what caused the fall.
- The answer is B.

9 Question 2: fenced plots and deer

- In a woodland, researchers fenced off several plots to keep out deer and left other plots open. After five years, the fenced plots held far more tree seedlings than the open plots. The researchers conclude that browsing by deer reduces the number of tree seedlings in the woodland.
- Which of the following, if true, most seriously weakens the researchers' conclusion?

IN THE LESSON

- Question two is a medium one.
- Read it with me.
- In a woodland, researchers fenced off several plots to keep out deer and left other plots open.
- After five years, the fenced plots held far more tree seedlings than the open plots.
- The researchers conclude that browsing by deer reduces the number of tree seedlings in the woodland.
- The question: Which of the following, if true, most seriously weakens the researchers' conclusion?
- This is an experiment with two groups of plots.
- Ask whether the groups were fair.

10 Question 2: were the plots alike?

Woodland: fenced plots held far more seedlings after five years

Conclusion	deer browsing cuts seedlings	**the claim**
Evidence	fenced plots: far more seedlings	**two groups**
Gap	the plots alike otherwise?	**the gap**
Prediction	fenced plots had an advantage	**unfair groups**

IN THE LESSON

- The conclusion: browsing by deer reduces the number of tree seedlings.
- The evidence: after five years, plots fenced against deer held far more seedlings than open plots.
- This is a comparison of two groups.
- A comparison shows the effect of the fences only if the two groups were alike in every other way.
- So the way to weaken it is tool two: unfair groups.
- Suppose the fenced plots had better soil, more light, or more water.
- Then the extra seedlings could come from those, not from keeping deer out.
- Predict: the fenced plots differed from the open ones in some way that helps seedlings grow.

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11 Question 2: the five choices

- A. The fenced plots were all in the part of the woodland with the richest soil, the open plots in the poorest.
- B. Some seedlings in the open plots survived browsing by deer.
- C. Fenced and open plots were allocated by a coin toss within each part of the woodland.
- D. The seedlings in every plot were counted by the same team using the same method.
- E. In the open plots, there were fewer seedlings in the places where signs of deer were more common.

IN THE LESSON

- Here are the five choices.
- Choice A.
- The fenced plots were all in the part of the woodland with the richest soil, the open plots in the poorest.
- Choice B.
- Some seedlings in the open plots survived browsing by deer.
- Choice C.
- Fenced and open plots were allocated by a coin toss within each part of the woodland.
- Choice D.
- The seedlings in every plot were counted by the same team using the same method.
- Choice E.
- In the open plots, there were fewer seedlings in the places where signs of deer were more common.
- Which one makes the groups unfair?

12 Question 2: test each choice

Prediction: the fenced plots had some other advantage

A: fenced plots on rich soil	soil explains the difference	**weakens**
B: some seedlings survived deer	deer can still cut the number	**too weak**
C: plots chosen by coin toss	makes the groups fair	**strengthens**
D: same team counted every plot	fair method, no rival	**method**
E: fewer seedlings near deer signs	fits browsing as the cause	**strengthens**

IN THE LESSON

- Choice A matches the prediction.
- If all the fenced plots were on the richest soil and the open plots on the poorest, the soil could explain the extra seedlings, so the groups were unfair and A weakens the conclusion.
- Choice B says some seedlings in the open plots survived.
- That is too weak: deer can reduce the number a great deal and still leave a few.
- Choice C is the opposite direction.
- A coin toss makes the plots alike, which strengthens the researchers.
- Choice D, the same team counting everywhere, is a fair method and offers no rival explanation.
- Choice E also strengthens: fewer seedlings where deer are most active fits browsing as the cause.
- The answer is A.

13 Question 3: wolves and willows

- Since wolves were reintroduced to the Arlen Valley, the number of elk there has fallen and the willow trees along the valley's streams have recovered. Ecologists conclude that the wolves have restored the willows by reducing the amount of browsing by elk.
- Which of the following, if true, most seriously weakens the ecologists' conclusion?

IN THE LESSON

- Question three is a hard one.
- The argument describes a chain of causes, so read it carefully.
- Since wolves were reintroduced to the Arlen Valley, the number of elk there has fallen and the willow trees along the valley's streams have recovered.
- Ecologists conclude that the wolves have restored the willows by reducing the amount of browsing by elk.
- The question: Which of the following, if true, most seriously weakens the ecologists' conclusion?
- Notice the word by.
- It tells you how the ecologists think it worked.

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14 Question 3: a chain of causes

Arlen Valley: wolves back, fewer elk, willows recovered

Conclusion	wolves, fewer elk, willows back	**a chain**
Evidence	elk fell, willows recovered	**together**
Weak link	less browsing saved the willows	**the gap**
Prediction	same recovery without the wolves	**no cause**

IN THE LESSON

- The conclusion: the wolves restored the willows by reducing browsing by elk.
- That is a chain with links: wolves, then fewer elk, then less browsing, then willows recover.
- The evidence: since the wolves returned, elk numbers fell and the willows recovered.
- To weaken a chain, break a link.
- The weakest link here is the last one.
- Did the willows recover because of less browsing, or would they have recovered anyway, perhaps because of the weather?
- Tool three, the effect without the cause, tests exactly this.
- If willows recovered just as well in places where browsing never changed, then less browsing is not what drove the recovery.
- Predict: willows recovered equally well where elk browsing was not reduced by the wolves.

15 Question 3: the five choices

- A. Elk numbers have fallen most in the parts of the valley where wolves are most often seen.
- B. Willows recovered as strongly inside plots from which elk had been excluded for decades.
- C. Elk now spend much less time along the stream banks, where willows grow, than before the wolves arrived.
- D. Counts of elk in the valley are made in winter, when elk gather in the lower parts of the valley.
- E. No other animal that browses willows is known to live in the valley.

IN THE LESSON

- Here are the five choices.
- Choice A.
- Elk numbers have fallen most in the parts of the valley where wolves are most often seen.
- Choice B.
- Willows recovered as strongly inside plots from which elk had been excluded for decades.
- Choice C.
- Elk now spend much less time along the stream banks, where willows grow, than before the wolves arrived.
- Choice D.
- Counts of elk in the valley are made in winter, when elk gather in the lower parts of the valley.
- Choice E.
- No other animal that browses willows is known to live in the valley.
- Which one shows the effect without the cause?

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16 Question 3: test each choice

Prediction: willows recovered just as well without the change

A: elk fell most near wolves	ties wolves to fewer elk	**strengthens**
B: recovery where elk kept out	recovery without the change	**weakens**
C: elk avoid the stream banks	less browsing by the willows	**strengthens**
D: elk counted in winter	a counting detail, every year	**method**
E: no other browsing animal	removes a rival cause	**strengthens**

IN THE LESSON

- Choice A ties the fall in elk to the wolves, which supports the chain.
- Choice B matches the prediction.
- Inside plots where elk had been kept out for decades, browsing did not change when the wolves came.
- Yet the willows there recovered just as strongly.
- So something other than less browsing, such as the climate, is likely behind the recovery, and B weakens the conclusion.
- Choice C supports the chain too: elk spending less time on the stream banks means less browsing exactly where willows grow.
- Choice D is a detail of how elk are counted, the same every year, so it gives no rival story.
- Choice E removes a rival browser, which strengthens.
- The answer is B.

17 Question 4: the dearer olive oil

- A delicatessen doubled the price of its premium olive oil, and the number of bottles sold per week rose. The owner concludes that shoppers read the higher price as a sign of higher quality and so buy more of the oil.
- Which of the following, if true, most seriously weakens the owner's conclusion?

IN THE LESSON

- Question four is another hard one, and the conclusion is about what shoppers think.
- A delicatessen doubled the price of its premium olive oil, and the number of bottles sold per week rose.
- The owner concludes that shoppers read the higher price as a sign of higher quality and so buy more of the oil.
- The question: Which of the following, if true, most seriously weakens the owner's conclusion?
- Before reading on, ask yourself why sales might rise when a price goes up.

18 Question 4: why did sales rise?

Delicatessen: price of premium oil doubled, sales rose

Conclusion	high price signals quality	**the claim**
Evidence	price doubled, sales rose	**a surprise**
Gap	is the price the reason?	**the gap**
Prediction	another reason to buy it	**another cause**

IN THE LESSON

- The conclusion: shoppers read the higher price as a sign of quality, and so buy more.
- The evidence: the price doubled and weekly sales rose.
- That is surprising, because usually a higher price means fewer sales, and the owner offers one explanation for the surprise.
- To weaken it, find another explanation for the rise in sales that has nothing to do with what shoppers believe about quality.
- Ask: what else might push shoppers towards this oil at the same moment?
- Perhaps a rival product vanished from the shelf, or a recipe made the oil fashionable.
- Predict: something else changed at the time that would make shoppers buy more of this oil, whatever its price says about quality.

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19 Question 4: the five choices

- A. Shoppers at the delicatessen care more about quality than about price, and often choose the dearest item on a shelf.
- B. Other shops in the town sell premium olive oil at the old price or less, so shoppers can find the same oil more cheaply.
- C. The bottle and label of the oil were not changed when its price was doubled, so the price was the only visible difference.
- D. At the time of the price rise, the shop stopped stocking its cheaper olive oil and has not stocked it since.
- E. Some shoppers stopped buying the premium olive oil after the price rose and now buy a different brand elsewhere.

IN THE LESSON

- Here are the five choices.
- Choice A.
- Shoppers at the delicatessen care more about quality than about price, and often choose the dearest item on a shelf.
- Choice B.
- Other shops in the town sell premium olive oil at the old price or less, so shoppers can find the same oil more cheaply.
- Choice C.
- The bottle and label of the oil were not changed when its price was doubled, so the price was the only visible difference.
- Choice D.
- At the time of the price rise, the shop stopped stocking its cheaper olive oil and has not stocked it since.
- Choice E.
- Some shoppers stopped buying the premium olive oil after the price rose and now buy a different brand elsewhere.
- Which one gives another reason for the rise?

20 Question 4: test each choice

Prediction: something else made shoppers buy this oil

A: shoppers pick the dearest item	fits price as a sign of quality	**strengthens**
B: cheaper oil in other shops	no rival reason for the rise	**no effect**
C: same bottle and label	price was the only cue	**strengthens**
D: cheaper oil no longer stocked	only one oil left to buy	**weakens**
E: some shoppers went elsewhere	sales rose all the same	**too weak**

IN THE LESSON

- Choice A says shoppers here choose the dearest item, which supports the owner's idea that price signals quality.
- Choice B, cheaper oil in other shops, leaves the puzzle as it was.
- It offers no rival reason for the rise.
- Choice C supports the owner too: if nothing else about the bottle changed, price was the only signal shoppers could read.
- Choice D matches the prediction.
- When the price rose, the shop stopped stocking its cheaper oil.
- Shoppers who wanted olive oil had only the premium bottle to buy, so sales could rise with no belief about quality at all.
- Choice E is too weak: some shoppers leaving is already allowed for, since total sales rose anyway.
- The answer is D.

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21 Accurate and quick

- Question line first: you want doubt
- Think of a rival story in ten seconds
- Mark each choice plus, minus or zero; pick the minus
- Accept surprising choices as true
- Two minuses? Pick the one that hits the gap

IN THE LESSON

- Some habits that keep you accurate and quick.
- First, read the question line first, and note that you want doubt, not support.
- Second, put the conclusion in a few words and ask, what else could explain the evidence?
- Spend ten seconds thinking of one or two rival stories.
- Third, read the choices and mark each one plus, minus or zero.
- In a weaken question you want the minus.
- Many students pick a plus by mistake, because it is about the right topic.
- Fourth, do not be put off by a choice that seems surprising.
- You must accept it as true.
- Fifth, if two choices weaken, pick the one that attacks the gap directly, not an exception the argument allows.

22 What the four questions taught

- Another cause: more police patrols
- Unfair groups: the richest soil
- Effect without the cause: willows anyway
- Another reason to buy: no cheaper oil

IN THE LESSON

- Look back at the four answers.
- In question one, doubled police patrols were another cause of the fall in burglaries.
- In question two, the fenced plots had the richest soil, so the groups were unfair.
- In question three, willows recovered just as well where browsing had not changed: the effect without the cause, which broke the last link of a chain.
- In question four, the cheaper oil disappeared at the same moment, another reason for shoppers to buy the premium oil.
- Four different stories, one idea: the evidence can be explained without the author's cause.
- And in three of the four questions, at least two wrong choices strengthened the argument.
- Always check the direction.

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23 Quick check

1. New road blamed for shop closures; rents rose the same year. Weakens?
   Answer: Yes: another cause.
2. A choice gives an exception the claim already allows. Good weakener?
   Answer: No: too weak.
3. Groups were chosen by coin toss. Does that weaken?
   Answer: No: it strengthens, as the groups are fair.

IN THE LESSON

- A quick check.
- Pause after each question.
- Question one.
- The argument says a new road caused shops to close.
- A choice says rents rose sharply the same year.
- Does it weaken?
- The answer is yes.
- Higher rents are another cause that could explain the closures.
- Question two.
- A choice offers an exception the conclusion already allows, such as a few seedlings survived.
- Is that a good weakener?
- The answer is no.
- It is too weak, because the claim survives a few exceptions.
- Question three.
- Two groups are compared, and a choice says they were chosen by coin toss.
- Does that weaken the argument?
- The answer is no.
- It strengthens it, because chance makes the groups fair.

24 Recap: the weaken method

- Conclusion, evidence, gap
- Predict another story
- Four ways to weaken a cause
- Check direction; name each trap

IN THE LESSON

- Let us recap.
- Find the conclusion, list the evidence and name the gap.
- Accept every choice as true.
- Predict another story that explains the evidence without the author's cause.
- Remember the four ways to weaken a cause: another cause, unfair groups, the effect without the cause, and a broken mechanism.
- Then test the choices, and name the trap in every wrong one: it strengthens, it is off topic, it is too weak, or it is a note on method with no rival.
- The right answer is the choice that leaves the conclusion least believable.
- Practise this on every weaken question, and say the rival story out loud before you read the choices.

Summary notes for the Charta whiteboard lesson. Figures are from the lesson's made-up examples.

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