CRITICAL THINKING Lecture #4





Argument Diagrams

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Diagraming an Argument: Instructions

Diagraming an argument to reveal its inferential structure works as follows:

- Circle and denote with a C the argument's main conclusion, I.
- Underline and number each premise and sub-conclusion (if any), and 2.
- 3. Arrange these into an argument map that faithfully represents the argument as given.

support, arranging these in a clear way that is visually easy to follow.

For each argument map, put boxes around the statements and use arrows to indicate inferential



Consider the following argument:

jewels.



The defendant must go to jail because he is guilty of stealing the



First, parse the argument as usual (parsing indicator words is optional):







The defendant must go to jail because he is guilty of stealing the ΡΙ



Second, put all the argument's statements into boxes:



[C] The defendant must go to jail.



The defendant must go to jail because <u>he is guilty of stealing the</u> Р

[1] The defendant is guilty of stealing the jewels.



Third, draw arrows from premises to the conclusion(s) it supports:





[C] The defendant must go to jail.



The defendant must go to jail because he is guilty of stealing the Р

[1] The defendant is guilty of stealing the jewels.



Try to make it easy to follow (I prefer maps that go top-down towards the conclusion):

> The defendant must go to jail because he is guilty of stealing

the jewels.



[1] The defendant is guilty of stealing the jewels.

[C] The defendant must go to jail.





Inference





[1] The defendant is guilty of stealing the jewels.

[C] The defendant must go to jail



Diagraming an Argument: Independent & Dependent Premises

An independent premise is a premise that *does not depend* on any other premises to provide support for its conclusion. So denying or removing an independent premise does *not* undermine the support that the conclusion may receive from those other premises.

A dependent premise is a premise that *does depend* on at least one other premise to provide joint support for its conclusion. So denying or removing a dependent premise *does* undermine the support that its linked premises provides for the conclusion.



Independent Premises: Illustration

The defendant signed a confession, thus he is guilty of stealing the jewels. Furthermore, we know he was present at the scene of the crime.

[1] The defendant signed a confession.

[C] The defendant is guilty of stealing the jewels.

[2] The defendant was present at the scene of the crime.



Dependent Premises: Illustration

there if he stole them. Therefore, he is guilty of stealing the jewels. CI [1] The jewels were found in the defendant's pockets.

[C] The defendant is guilty of stealing the jewels.

Remember: Break apart all *conjunctive* statements (like that first sentence above) by treating its conjuncts as separate statements within the argument. This means each conjunct gets its own box in the diagram. Also, once more, do *not*—I repeat: do **not**—break apart *disjunctive* and *hypothetical* statements in a similar fashion.



[2] The jewels would only be in the defendant's pockets if he stole them.









Chain Arguments: Illustration

were on the safe. We know this (since) the forensic report says so.





Chain Arguments: Illustration

Premise -

Inference

Sub-Conclusion-

Inference

Main Conclusion



[1] The defendant's fingerprints were on the safe.

[C] The defendant was at the scene of the crime.

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The Full Argument Diagram

The forensic report says the defendant's fingerprints were on the safe.

> The defendant's fingerprints were on the safe.

The defendant was at the scene of the crime.





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Analytic Summary: Illustration

The defendant must go to jail because he is guilty of stealing the jewels. There are three sets of reasons for this. First of all, the defendant signed a confession. Second, the jewels were found in the defendant's pockets and they would only be there if he stole them. Third and finally, the forensic report says the defendant's fingerprints were on the safe, and so his fingerprints must be those on the safe, thus implying that he was at the scene of the crime.





Different Inference Patterns

Learn to recognize the difference between these three patterns:

Independent Premises



Dependent

Premises





Conclusion



Next Class...

We will practice more argument diagramming.

