Argumentation Structure

I - Introduction

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Based on A. Francisca Snoeck Henkemanns:
State-of-Art: The Structure of Argumentation

Recurrent questions

1. How to extract the structure of a complex argument?
2. Which types of structures can we extract on what kind of base?

Today, as a start:

Requirements:

1. Understanding the single arguments (reasons)
2. Understanding how the arguments are connected

Terminology

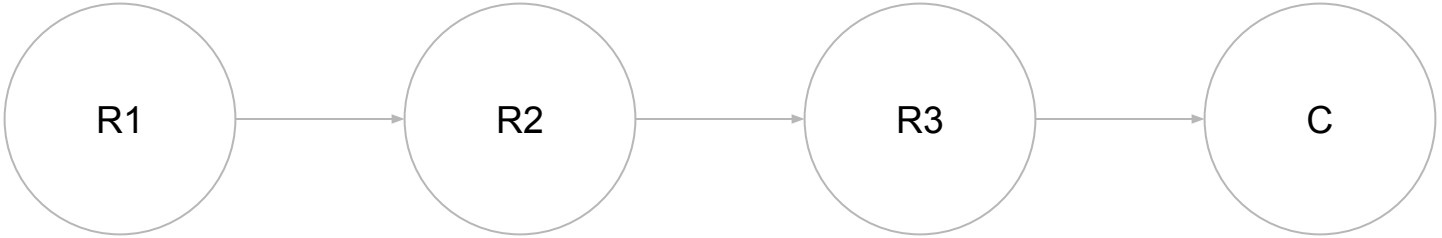
reason, premise: a statement which can be used to reason for or support a claim

conclusion: a claim which has been stated by one or a series of premise

argumentation structure: the underlying structure, the connections, of how the arguments state the conclusion

Three major structures: 1 - serial reasoning

Reasons support each other:

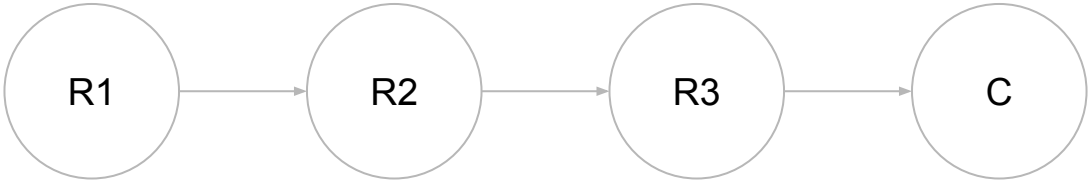


Example: serial reasoning

R1: Processed meat contains components which are cancer conductive.

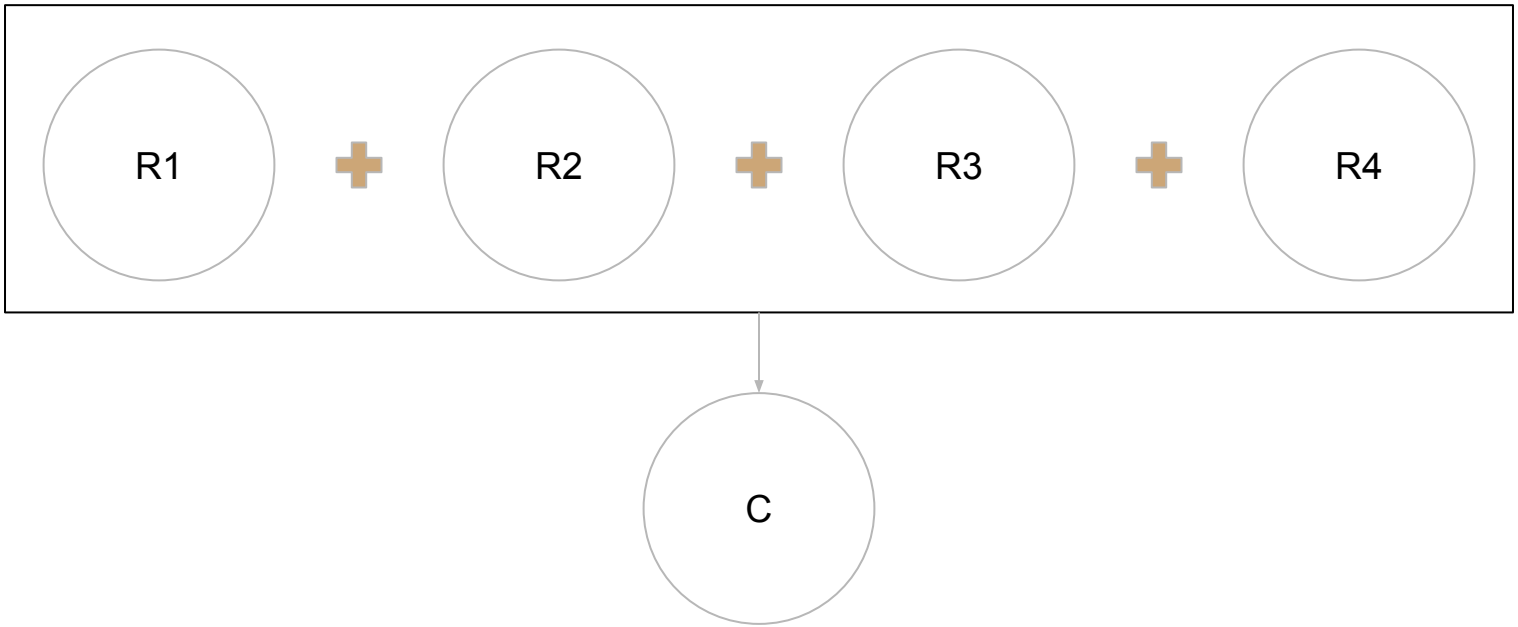
R2: Consuming a lot of processed meat can cause cancer.

C: One should not eat a lot of processed meat



Three major structures: 2 - linked reasoning

Reasons work as unit and are directly related to standpoint:

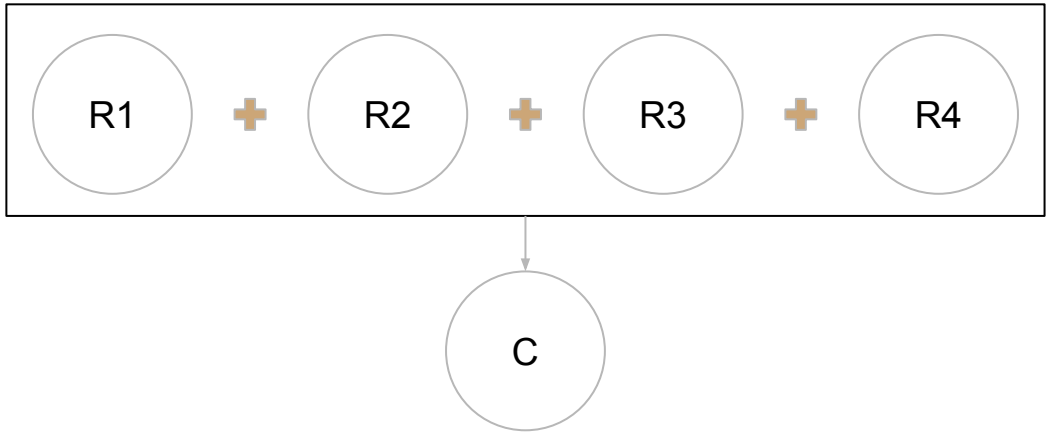


Examples: linked reasoning

R1: The dress on the picture is either blue or white.

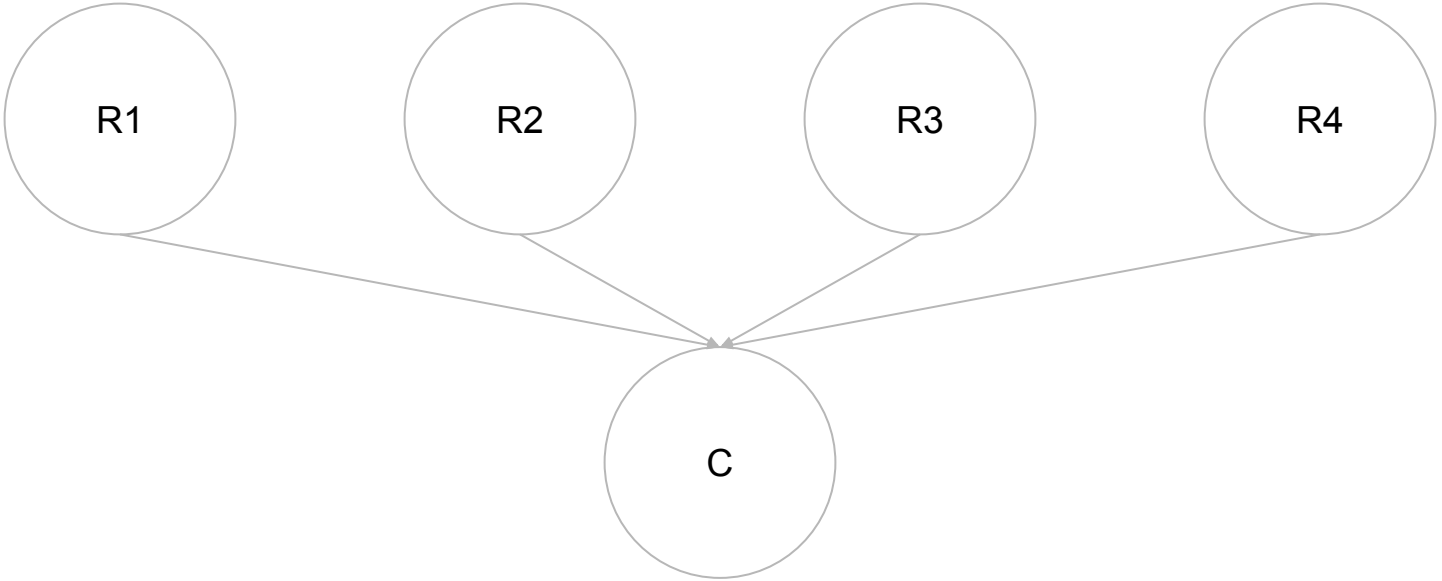
R2: The dress is not white.

C: The dress is blue.



Three major structures: 3 - convergent reasoning

Reasons work individually and are directly related to standpoint:

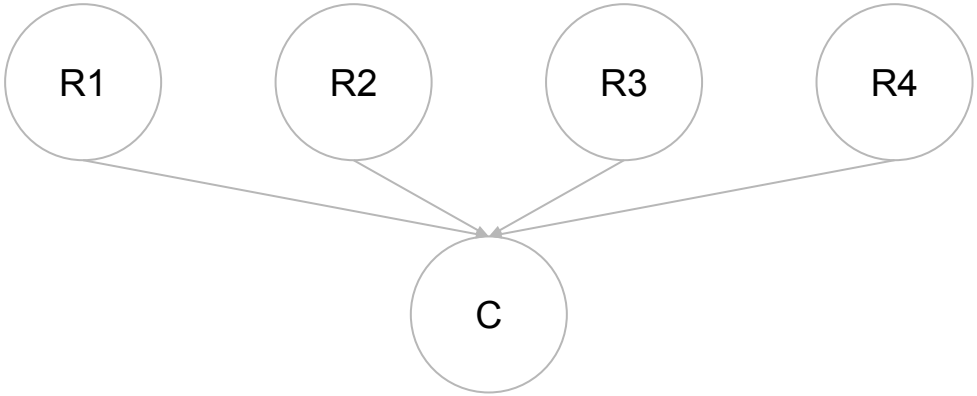


Examples: convergent reasoning

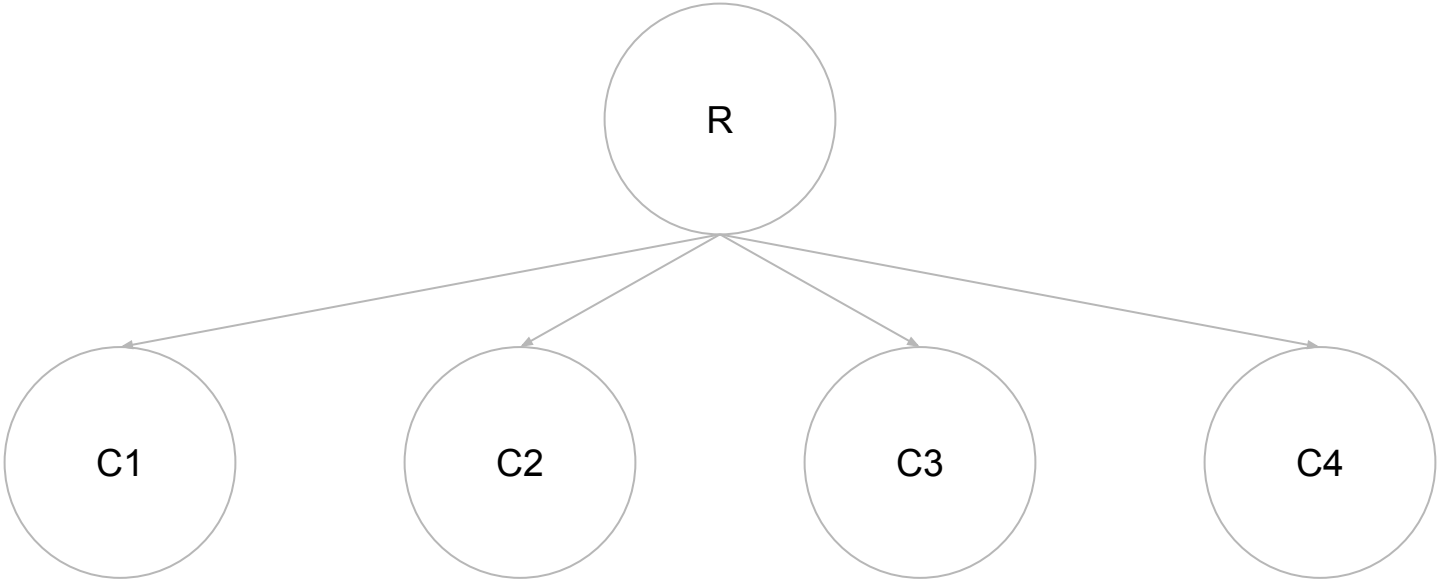
R1: Buying clothes at Primark will encourage labour exploitation.

R2: Primark clothes have low quality and can’t be used more than once.

C: Don’t buy stuff at Primark.

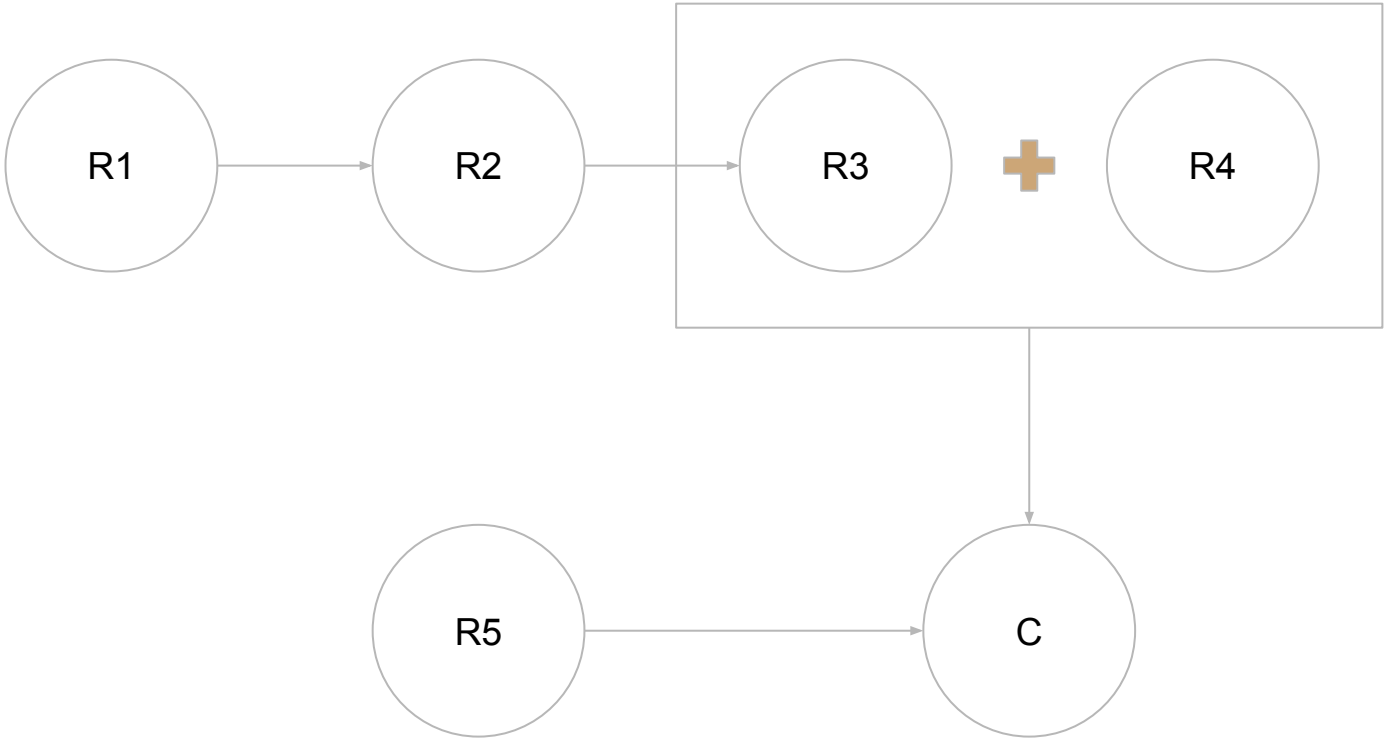


~~Three~~ Four major structures: divergent reasoning



Let’s try to find some more examples!

Complex argumentations can combine all of these structures


R1
R2
R3
R4
R5
C

Another Model: The Toulmin Model

Created by Stephen Toulmin (1922-2009), british philosopher, specialized in argumentation theory.

Idea: Argumentations mostly consist of six parts.

1. Grounds, Evidence
2. Warrant
3. Backing
4. Rebuttal
5. Qualifier
6. Conclusion

Another Model: The Toulmin Model

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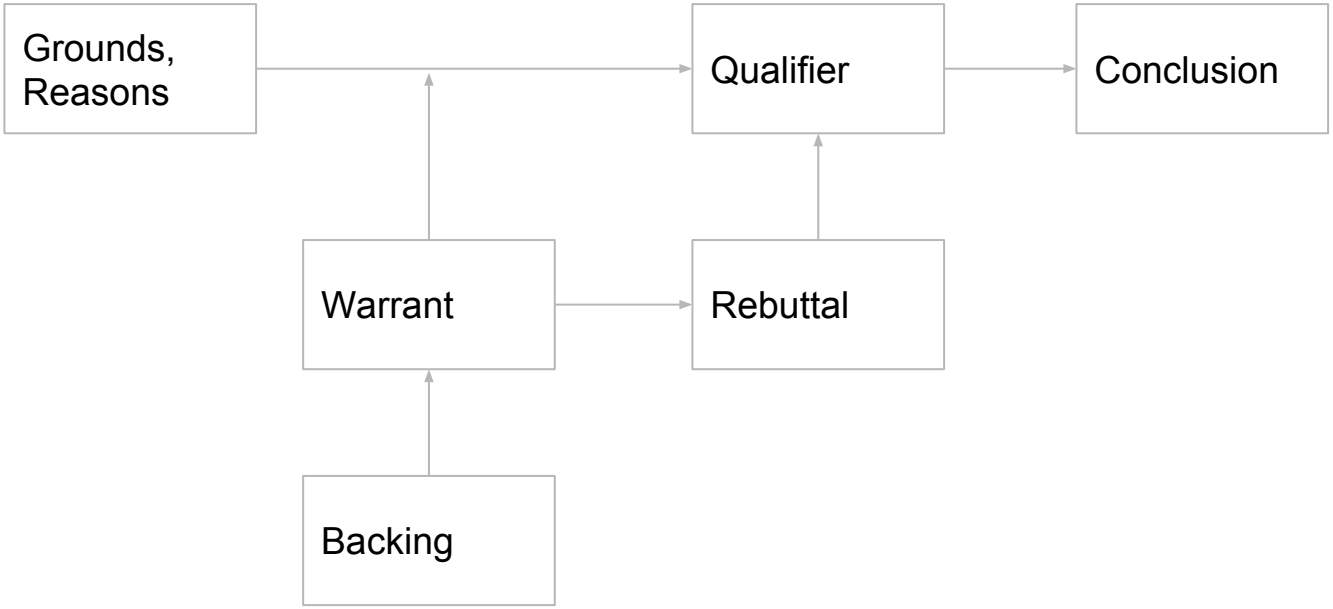
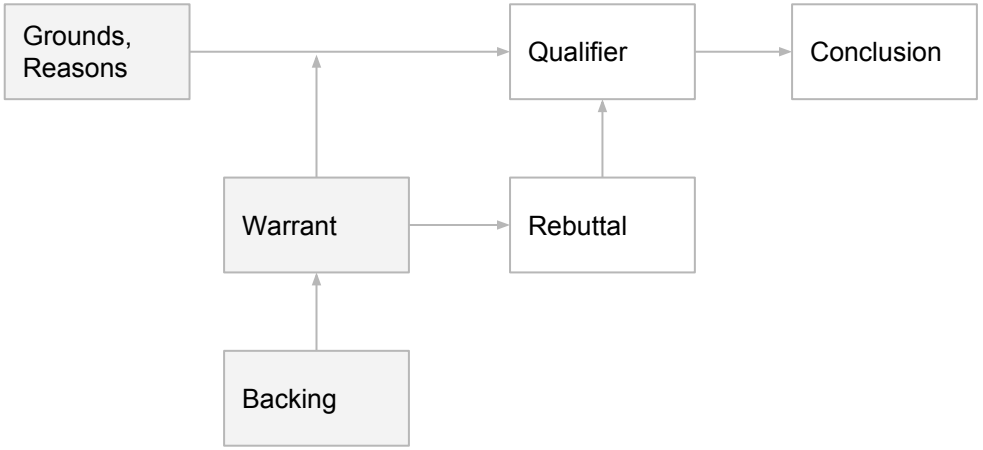


The Toulmin Model - I

Grounds: Data, evidence that supports the conclusion

Warrant: Reasoning that connects the grounds with the conclusion (often not spoken out)

Backing: Supporting the idea of the warrant

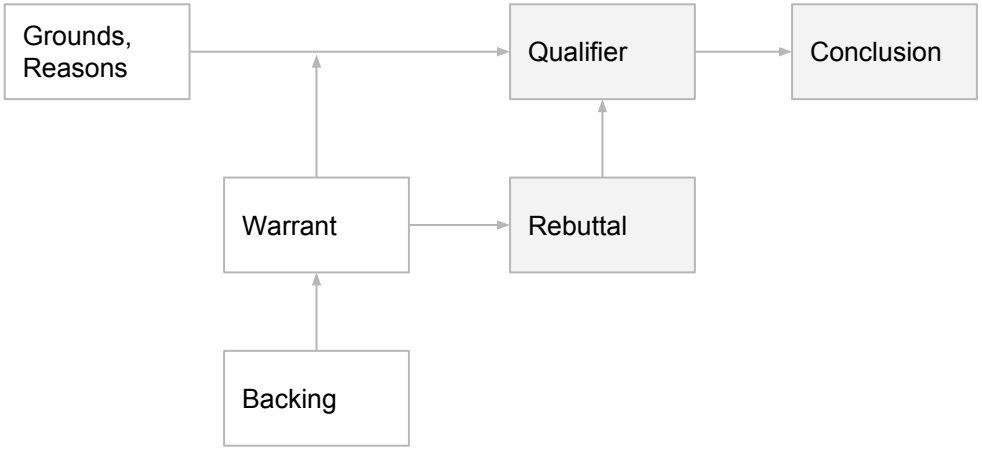


The Toulmin Model - II

Qualifier: Specifying the boundaries of the conclusion, warrant and backing

Rebuttal: Exceptions to the conclusion, can also be used to defend against counter-examples

Conclusion: Claim or position that is getting argued about



The Toulmin Model - Example

Congress should ban animal research (?) because animals are tortured in experiments that have no necessary benefit for humans such as the testing of cosmetics (?). The well being of animals is more important than the profits of the cosmetics industry (?). Only congress has the authority to make such a law (Warrant) because the corporations can simply move from state to state to avoid legal penalties (?). Of course, this ban should not apply to medical research (?). A law to ban all research would go too far (?).

So, the law would probably (?) have to be carefully written to define the kinds of research intended (?).

The Toulmin Model - Example

Congress should ban animal research (Claim #1) because animals are tortured in experiments that have no necessary benefit for humans such as the testing of cosmetics (Data). The well being of animals is more important than the profits of the cosmetics industry (Warrant). Only congress has the authority to make such a law (Warrant) because the corporations can simply move from state to state to avoid legal penalties (Backing). Of course, this ban should not apply to medical research (Qualifier). A law to ban all research would go too far (Rebuttal).

So, the law would probably (Qualifier) have to be carefully written to define the kinds of research intended (Claim #2).

Differences between the approaches

Three major structures vs. Toulmin Model

Differences between the approaches

Three major structures

More about structure, the logic between the reasons.

Toulmin Model

More about functions of the reasons, which role the reasons play.

That’s it for today

Thank you for your attention

Sources

Critical Thinking: Step by step
Robert Cogan
https://books.google.de/books?id=Fit9rjXiLBUC

How To Reconstruct Linked, Convergent and Serial Arguments with Argunet
http://www.argunet.org/2013/06/12/how-to-reconstruct-linked-convergent-and-serial-arguments-with-argunet/

Toulmin Model of Argument
https://web.cn.edu/kwheeler/documents/Toulmin.pdf

The Toulmin Model of Argumentation
https://www.youtube.com/watch?v=D-YPPQztuOY