THE UNIVERSITY OF MELBOURNE

Introducing Argument Mapping, CASE and MindMup

Session 1

Identifier first line

Second line

Goals for the sessions

1. Introduce you to argument mapping.
2. Learn how to evaluate arguments with argument maps.
3. Improve your essay writing through argument mapping.

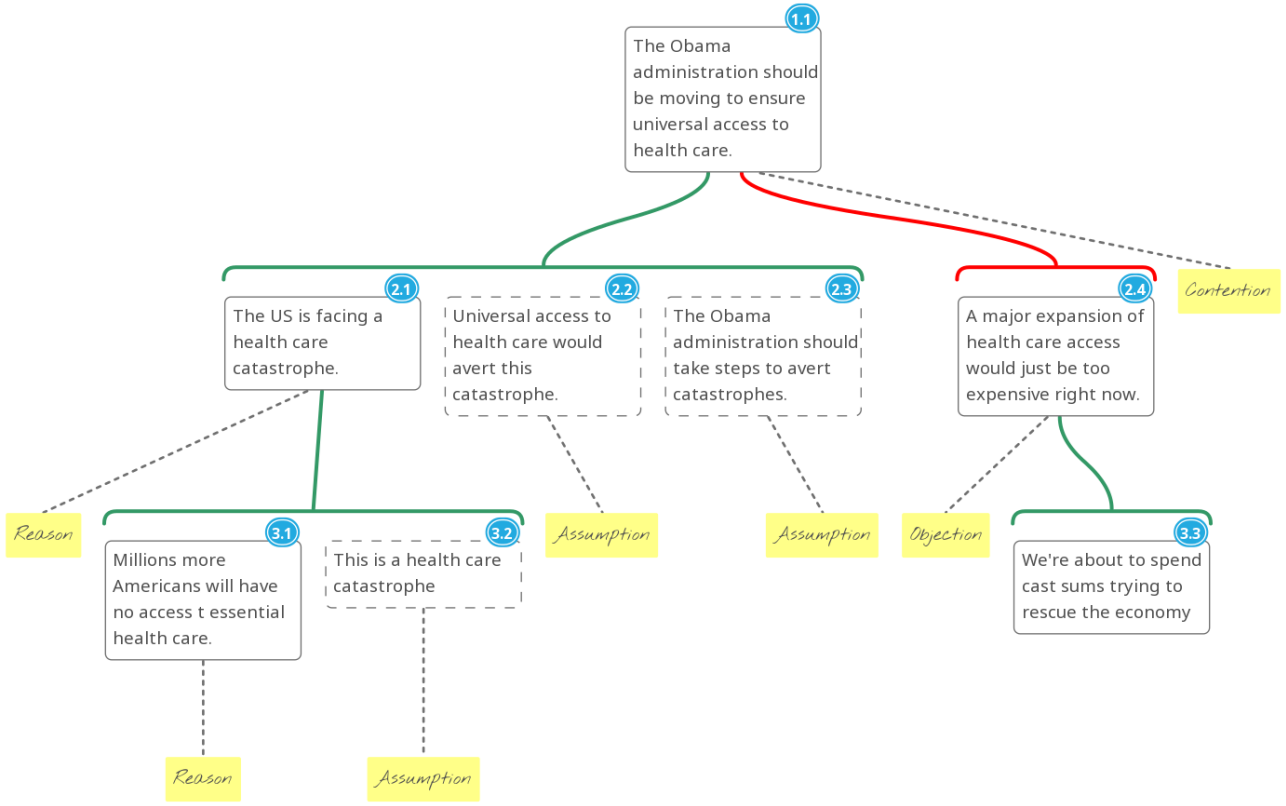
Outline of sessions

Session	Description
1	Introducing CASE argument mapping and argument mapping software
2	Argument mapping and abstraction
3	Bridging claims and the ‘Rabbit Rule’
4	Mapping sample essays
5	Mapping course material

Argument mapping is a way to visually represent your argument

Using a few conventions, we can diagram an argument:

- Box and line diagrams
- A box represents a proposition or claim
  - *"The Obama administration should be moving to ensure universal access to health care"*
  - *"The US is facing a health care catastrophe"*
- A colored line indicates the relationship between boxes
  - Green for supports, red for objects
- Labels to indicate proposition/claim types
  - Reasons, assumptions, objections



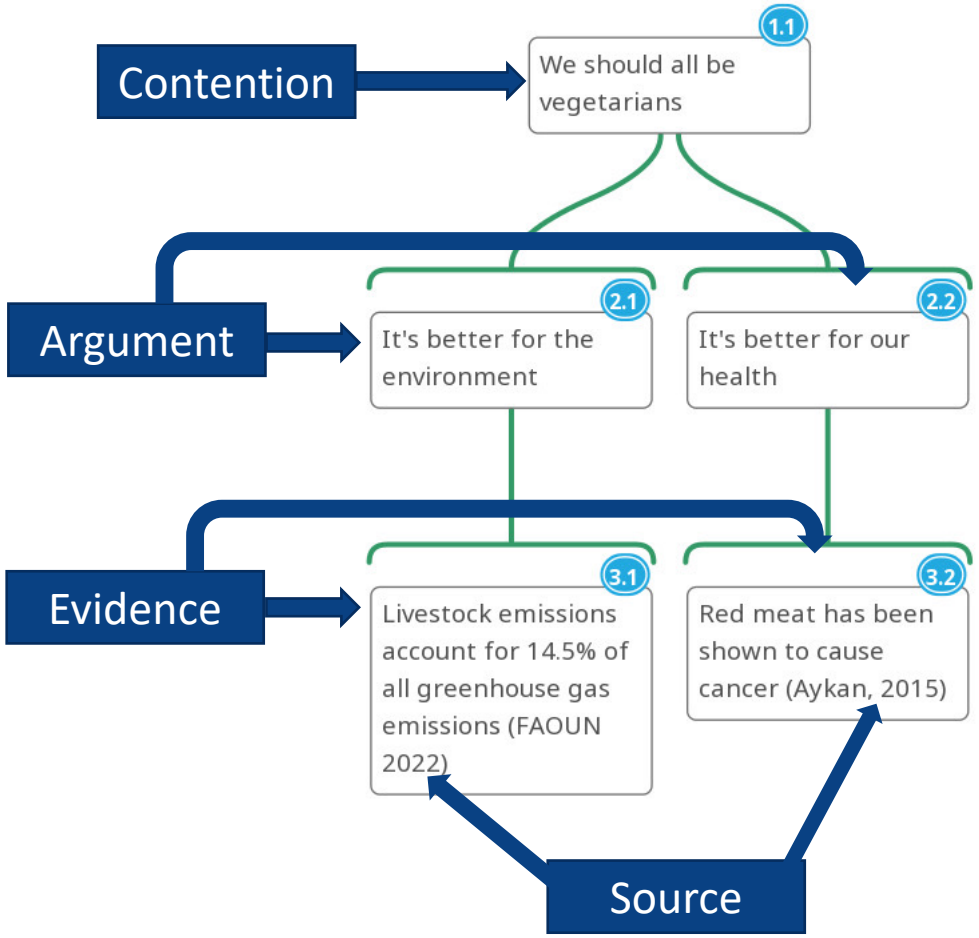
CASE is an *argument scheme* or type of argument map

CASE = **C**ontention, **A**rgument, **E**vidence, **S**ource – That's the order of the map from top to bottom.

Additional conventions

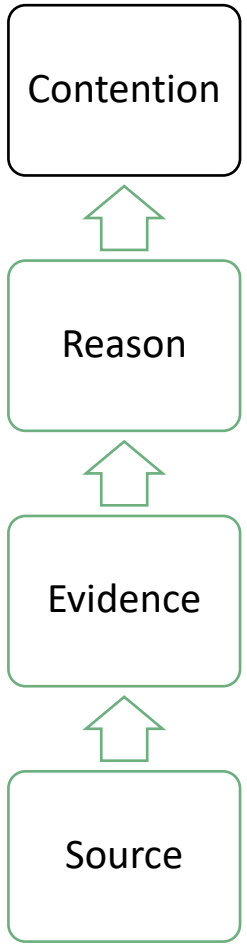
- Start with a *contention*
- Next layer is the *argument*
  - Arguments consist of '**reasons**' and '**objections**'
- Which is supported by *evidence*
- Making sure the evidence is properly *sourced*.

We should all be vegetarians. It's better for the environment and better for our own health. Livestock emissions account for 14.5% of all GHG (FAOUN 2022), and red meat has been shown to cause cancer (Aykan, 2015).



Labelling the CASE elements

A contestable proposition.



The Prime Minister is in trouble.

A general argument supporting to that proposition

The opposition is more popular.

Detailed information backing up the Reason

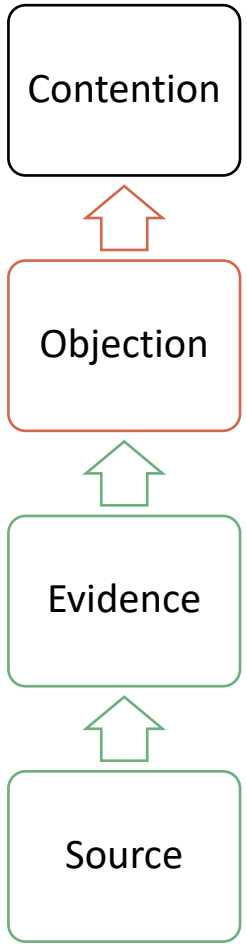
The opposition is ahead in the polls.

The source of the information.

Fairfax-Ipsos poll in *The Age* March 25th

Labelling the CASE elements

A contestable proposition.



New Zealand should change their flag.

A general argument objecting to that proposition

New Zealanders don't want the flag to be changed

Detailed information backing up the Objection

Keeping the current flag was voted for in a referendum.

The source of the information.

NZ Flag Referendum 2015-16

Labelling the CASE elements

A contestable proposition.	Contention	Animal testing should be banned
A general argument objecting to that proposition	Objection	Animal testing is necessary for medical development
A rebuttal to the argument (objection to an objection)	Rebuttal	Not all animal testing is done for medical purposes
Evidence backing up the rebuttal	Evidence	Cosmetics are tested on animals
The source of the information.	Source	Humane Society 2015

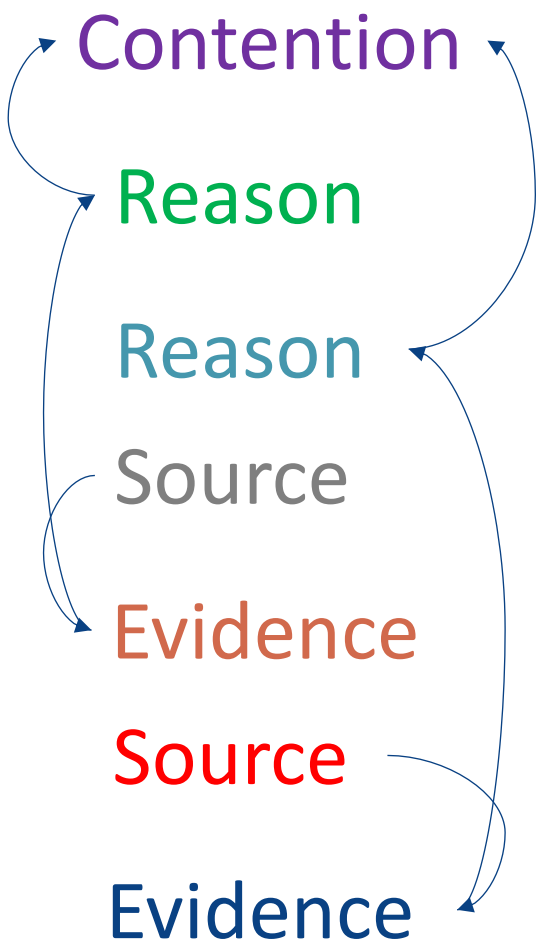
See if you can identify the CASE elements and relationships between them in the handouts

Argument	CASE Elements to Label
The Case for Nuclear Power	• Contention • Reason(s) • Evidence supporting the Reason(s) • Source(s)
Should home-schooling be banned?	• Contention • Reason • Objection • Evidence supporting the Reason & Objection Source(s)
Sudden oak death	• Contention • Reason • Objection • Evidence supporting the Reason • Rebuttal (objection to an objection)

- Elements in the arguments won't necessarily follow the CASE format
- Draw lines connecting the elements to show support for, or objections to, claims

Solution: The Case for Nuclear Power

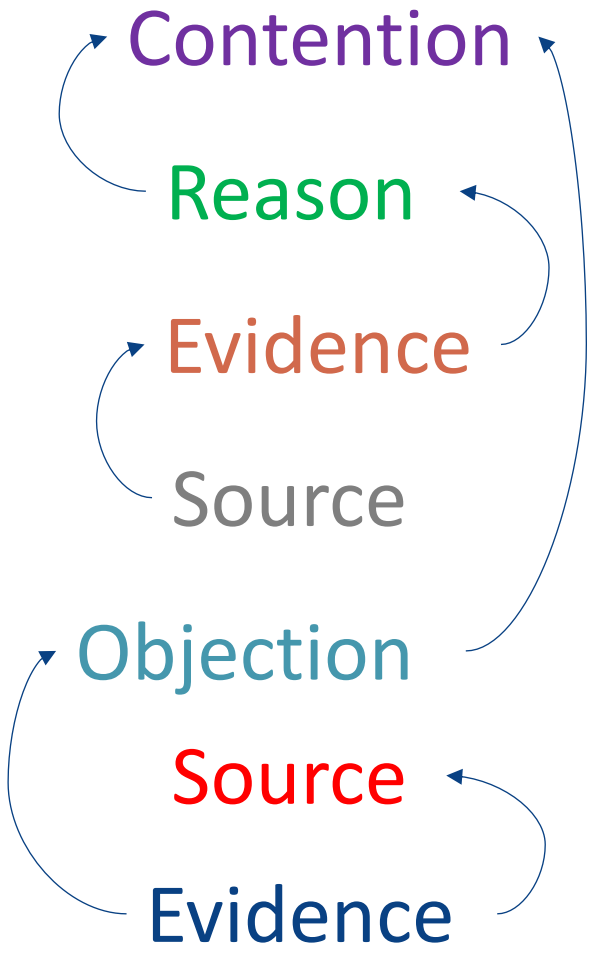
We should be building more nuclear power plants because nuclear power has very low greenhouse gas emissions and is one of the most reliable sources of electricity in the world. According to the IPPC, nuclear power has lower life-cycle C02 equivalent emissions than solar PV. Also, according to the US Department of Energy, our 104 nuclear power plants operate on average more than 90% of the time.



Solution: Should home-schooling be banned?

Recently, there has been some controversy over home-schooling which revolves around whether home-schooling should be banned. Those that believe it should argue that home-schooling gives children a biased education. 75.3% of respondents to a survey of adult home-schooled alumni reported that they were taught the superiority of a particular political ideology (HARO 2014 Survey of Home-schooled Alumni).

On the other hand, banning home-schooling would infringe upon the most basic freedoms of liberal democracies; one of which (according to the US supreme court) is the right to oversee the raising and education of one's own children.

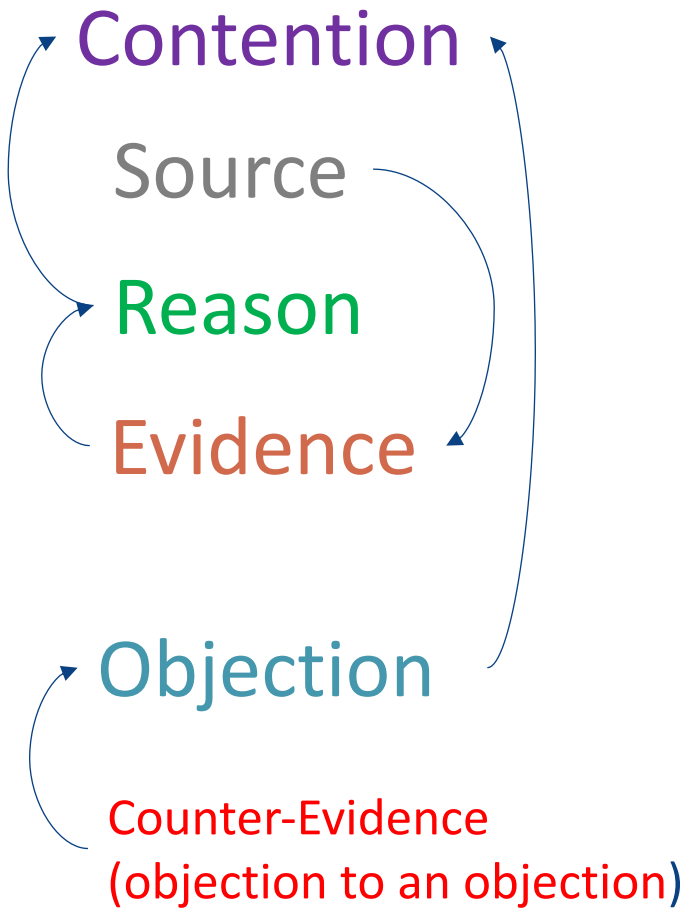


Solution: Sudden Oak Death

Slowing the spread of sudden oak death (P.ramorum) is now not possible, and has been impossible for a number of years, according to a new study. The research was led by Nik Cunniffe of the University of Cambridge, in collaboration Richard Cobb from the University of California, Davis.

There's so much pathogen mass now in California forests that the study's model finds that it will just spread, and spread. As pathogen biomass increases, says Cobb, "the rates of spread accelerate, and so does cost." More specifically, the study found that unchecked, sudden oak death will grow to affect close to ten times the current area — from around 1,550 square kilometres today to 14,000 square kilometres by 2030.

Some people think you could stop the spread of sudden oak death by going in and removing infected trees across a large area. However the study also found that an attempt to manage the problem by removing infected trees over 200 square kilometres annually, at a cost of $ 100 million, would make little dent in this spread.



We use the CASE scheme to help our readers understand our argument and to help us to evaluate it

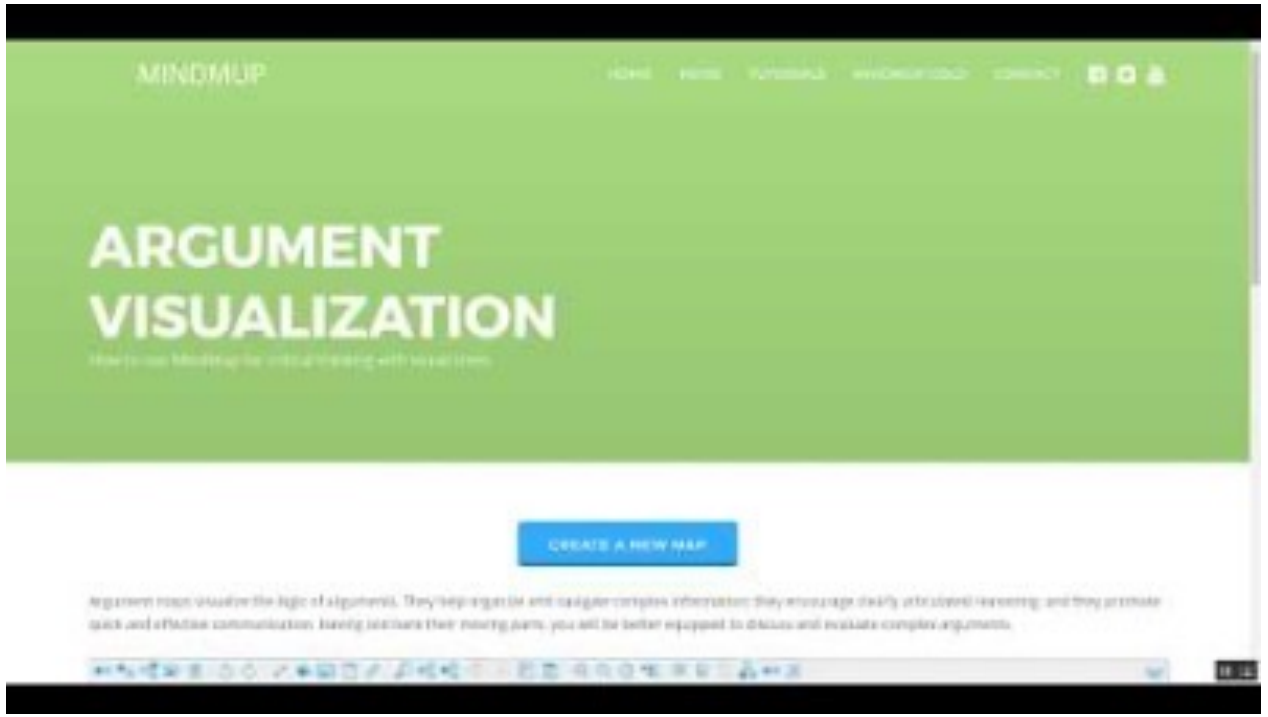
- It helps us structure our arguments when it comes to writing essays or articles.
- If this structure is obvious, then the reader will have an easier time understanding our reasoning.
- Readers don't need all the finer detail to get to grips with what your argument is, just the high-level points.
- It gives us a clearer view of exactly what our reasoning is.
- We can then more easily see problems (with the help of some principles we'll learn later)
- If we can see the problems, we can fix them.
- Practicing this technique can help build critical thinking skills.

We'll be using the MindMup software to map arguments

Access instructions:

1. Link to access is on pg.3 of you workbook.
2. At the top of the page, click 'sign in'
3. Enter your email to receive a 'one time password'
4. Submit the password you were sent to log in.
5. Then click 'file' then 'new' and finally '**Argument Visualisation'**

Whenever you create a new map, ensure that you create a new 'Argument Visualisation'. Otherwise you won't have access to the features you'll need.

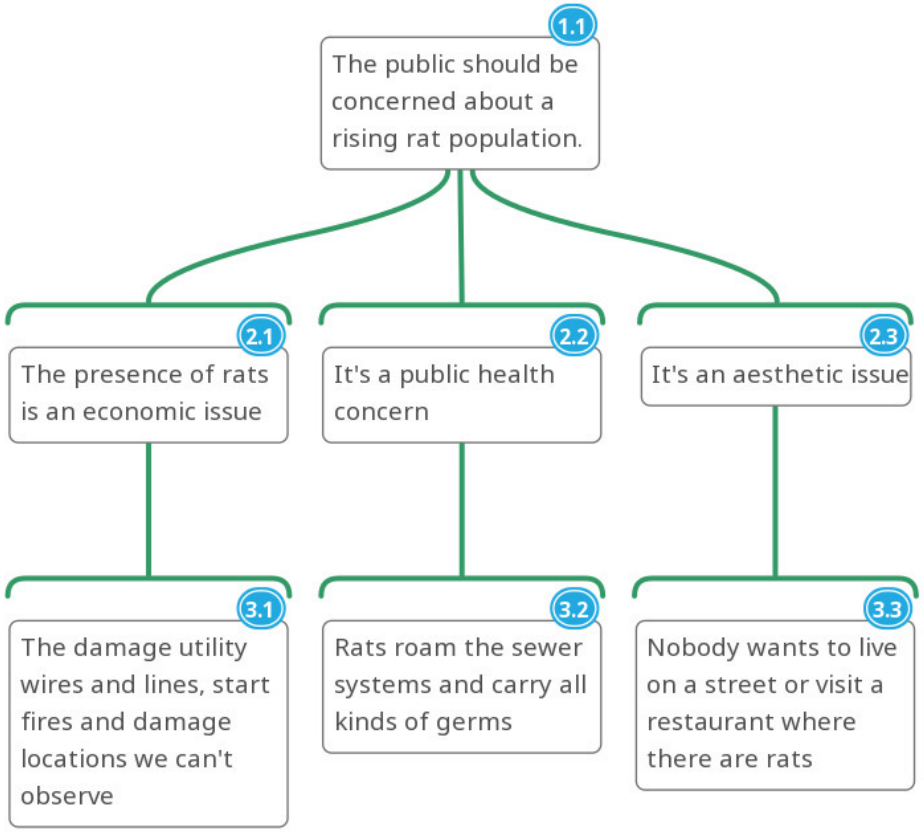


Now it's your turn! Try using MindMup to map these arguments

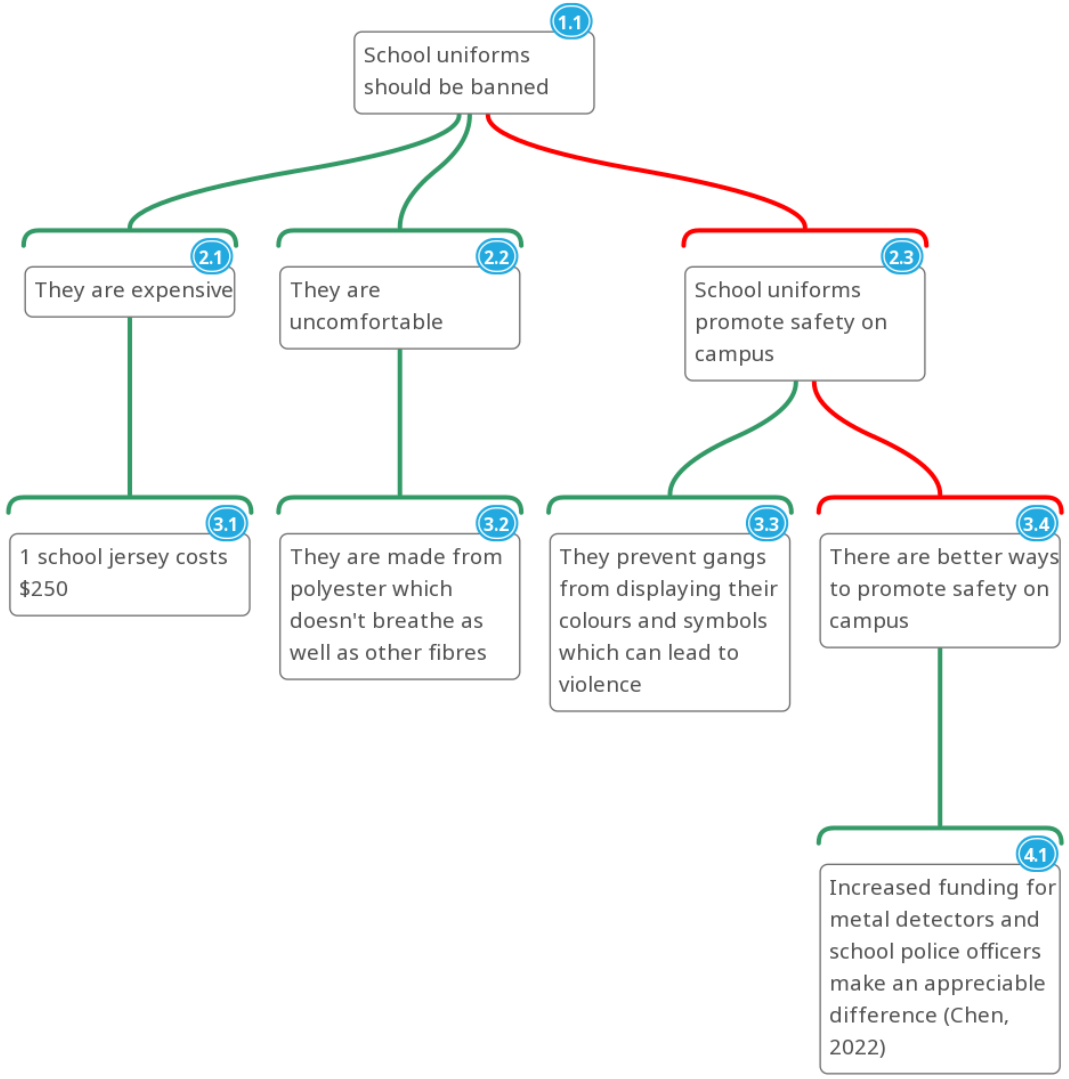
Check your handouts for the following arguments and try to map CASE map them:

- Rats
- School Uniforms
- Drug Legalization

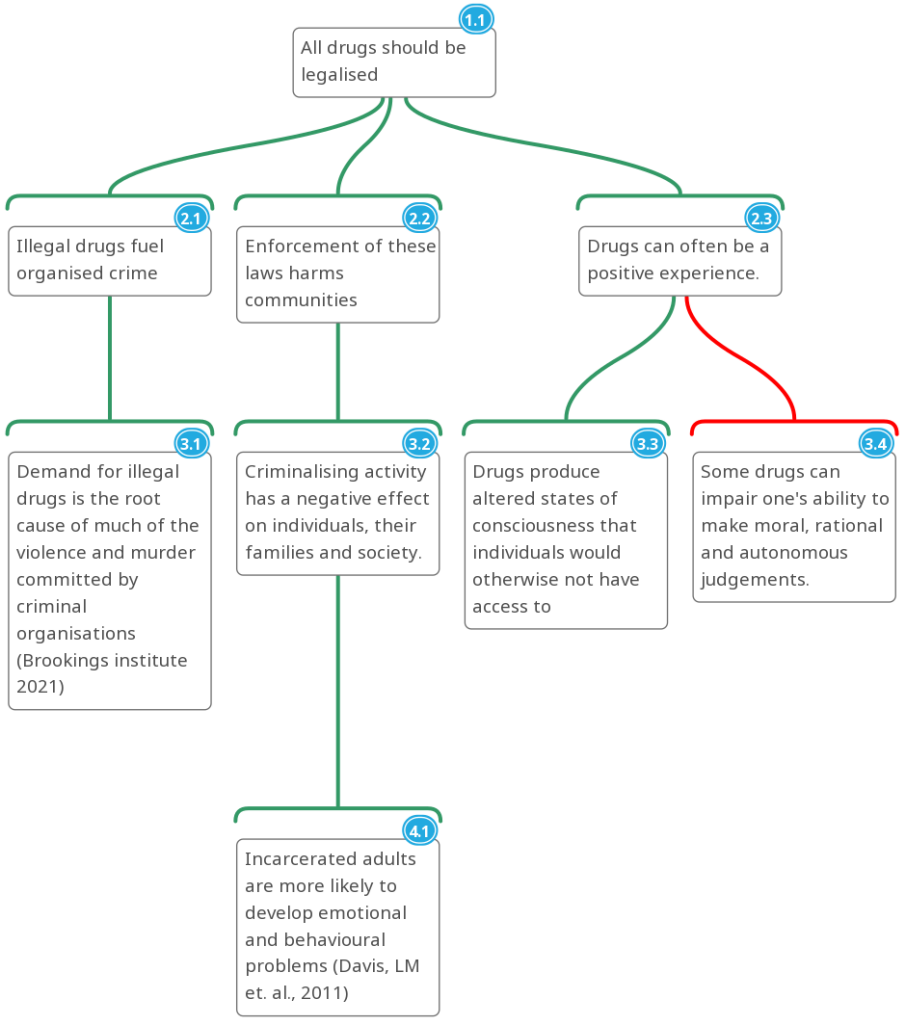
Solution 1: Rats



Solution 2: School Uniforms



Solution 3: Drug legalization



Next time we'll learn a bit more about CASE and practice some more mapping in groups

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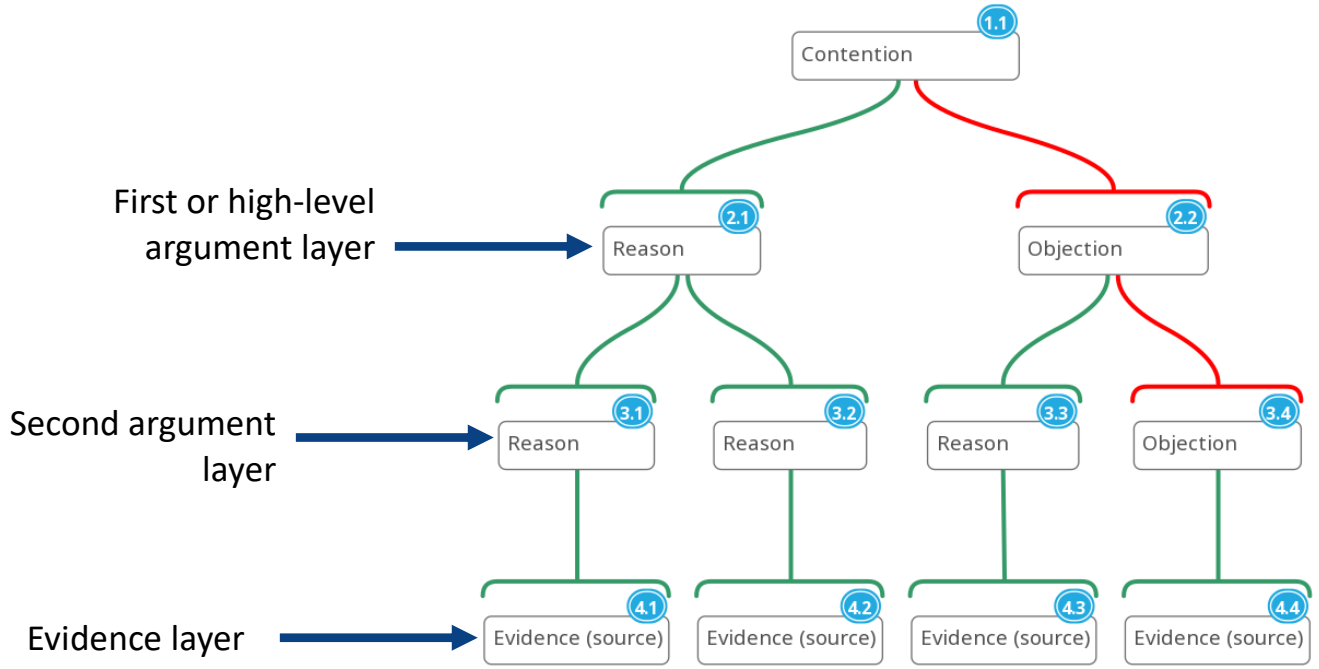
CASE Mapping, *Abstraction* and ‘rolling your own’

Session 2

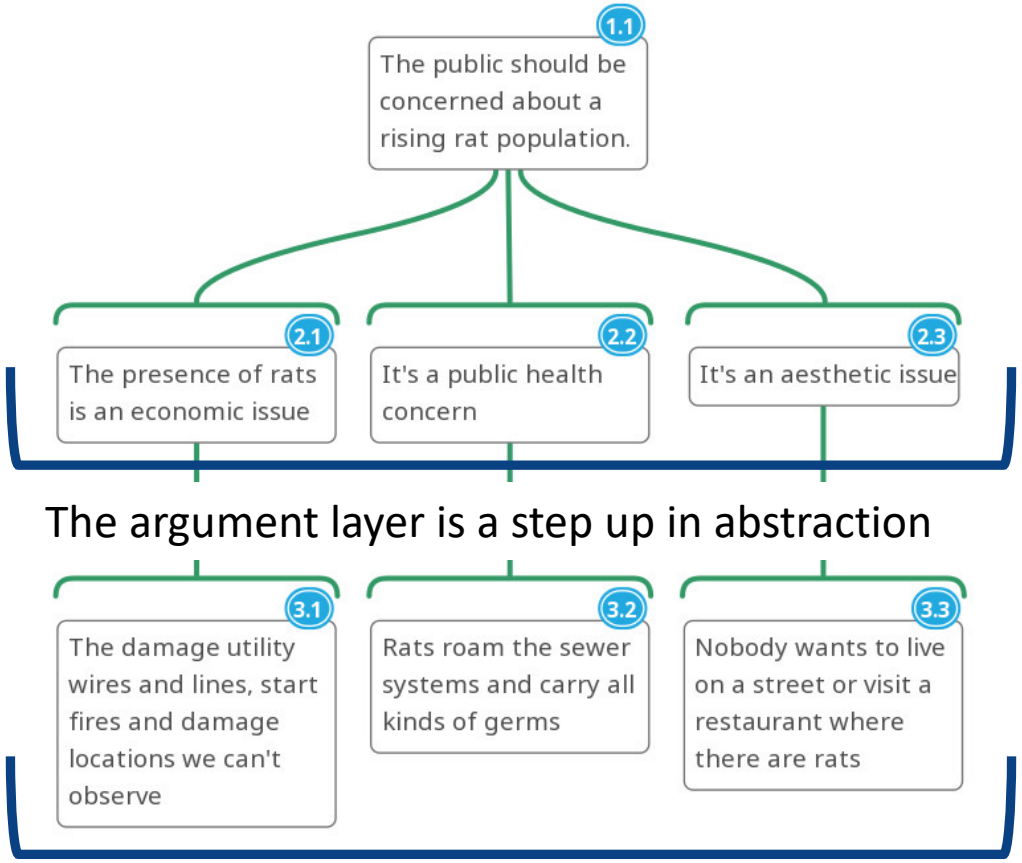
Recap of ‘argument layers’

- A CASE argument map can have many ‘argument layers’
- A layer houses all the ‘reasons’, ’objections’ and ‘rebuttals’.
- Argument layers exist in between the contention at the top, and the evidence/source at the bottom



Abstraction connects the evidence with the contention

The argument layer in a CASE map should start with the most abstract claim and get increasingly more specific, ending with the evidence which is the least abstract/most specific.



The argument layer is a step up in abstraction

The evidence is specific

Increasingly abstract claims for a *ladder of inference*

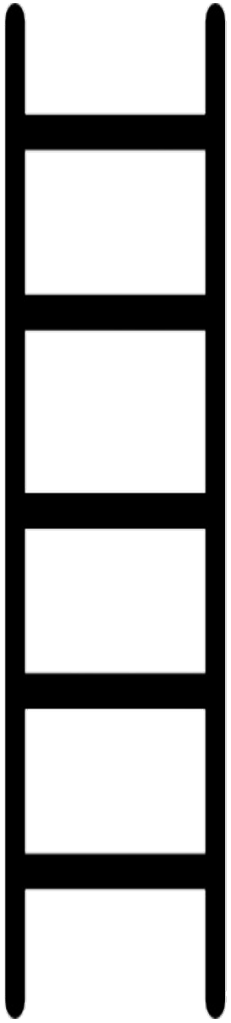
Bessie is **wealth**

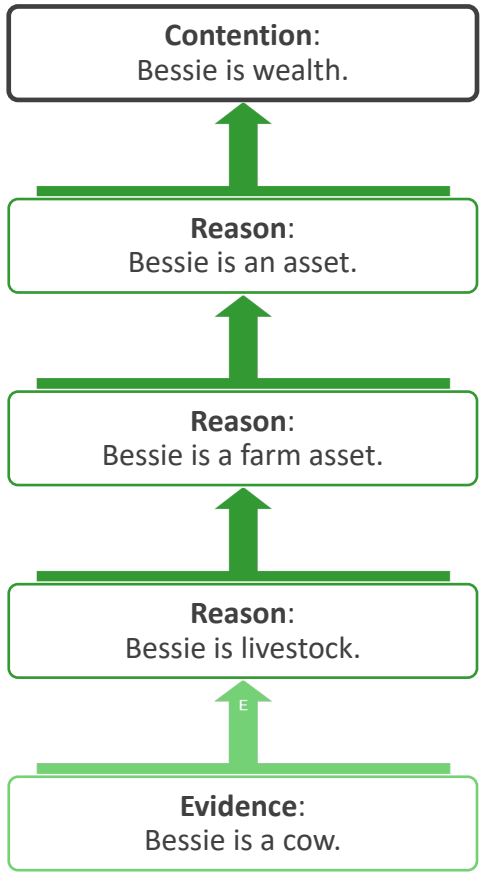
Bessie is an **asset**

Bessie is a **farm asset**

Bessie is **livestock**

Bessie is a **cow**





A good CASE map won't have missing rungs on the ladder

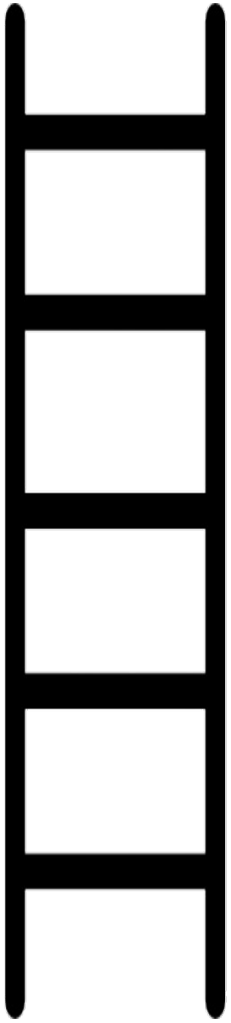
Bessie is **wealth**

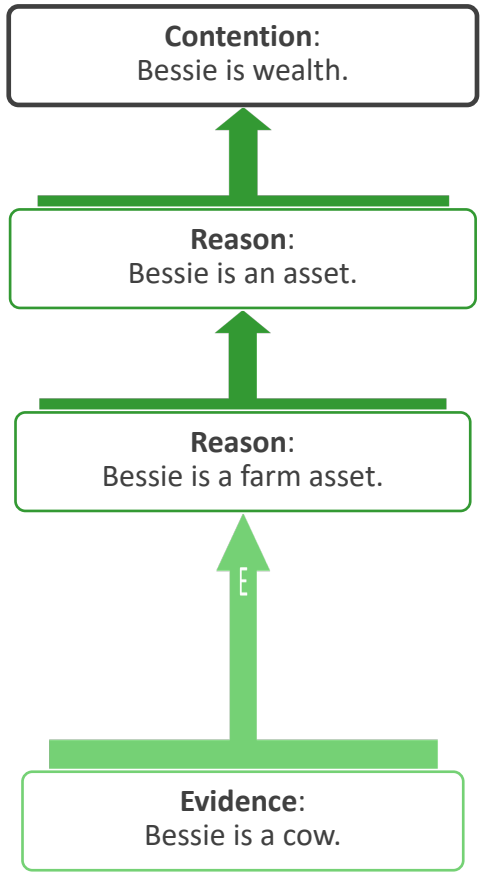
Bessie is an **asset**

Bessie is a **farm asset**

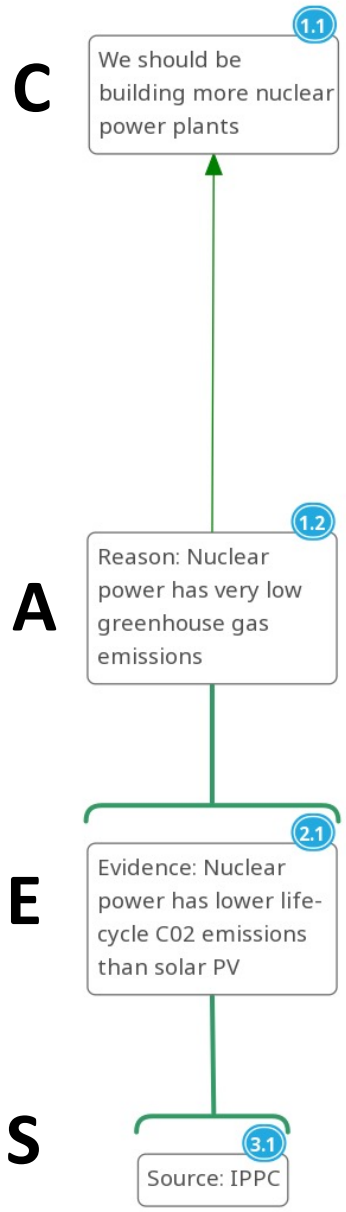
supports?

Bessie is a **cow**

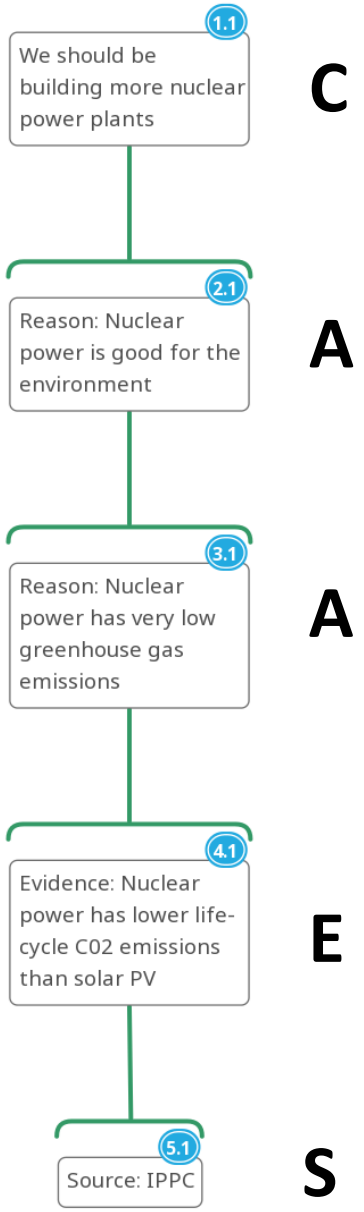




Compare these two arguments



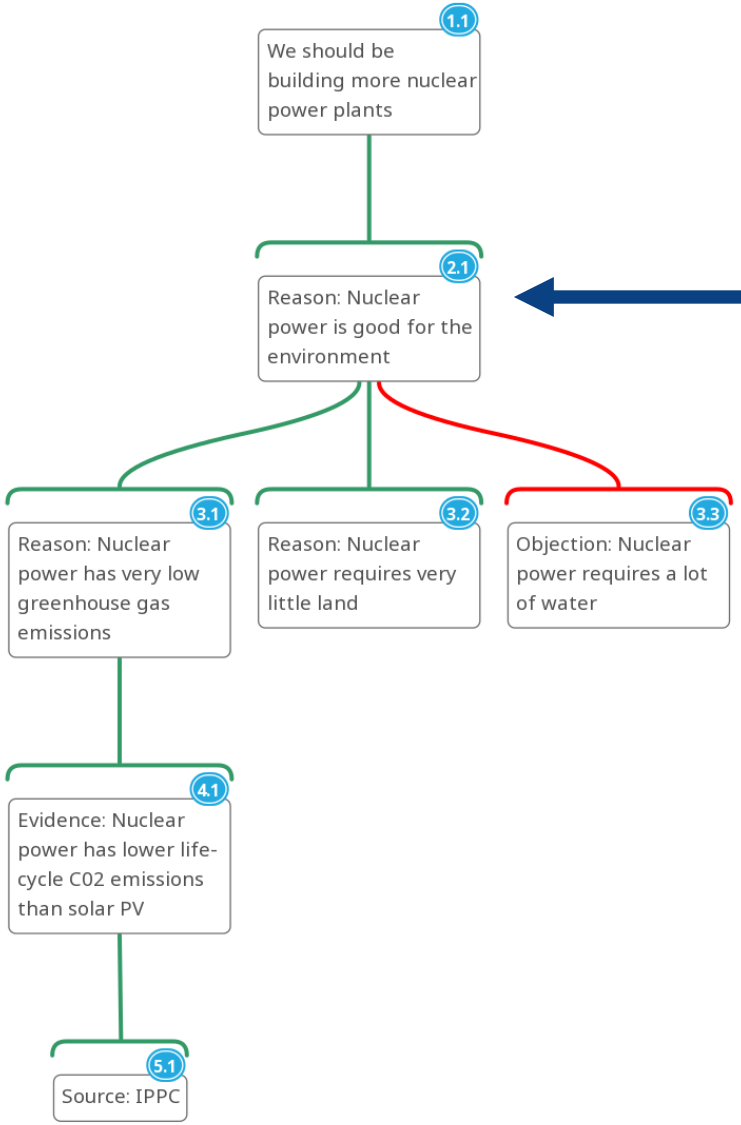
It's difficult to infer that we should be building more nuclear power plants just from the fact that is has low GHG emissions.



Much easier to make the inference with an added layer of abstraction.

(But it's still not really a valid inference – more on that next session)

Abstraction gives us a vantage point from which you can see what might be missing from an argument



From this vantage point we can now ask ‘is it actually good for the environment?’

We only had one reason before, not particularly convincing.

From here, we can ask what other reasons might support it? One might be that it requires very little land.

Critically, we also now have space to consider objections to the claim that it in fact is ‘good for the environment’. It might not be because it requires a lot of water.

Abstraction is *hard*, but it's the main thing separating a good argument map from a bad one

- There can be multiple level of abstraction between Evidence and Contention
- People typically do not include enough abstraction ("missing rungs")
- Each rung in the ladder gives a vantage point from which you can see what might be missing from complex reasoning

Which of these claims is most abstract?

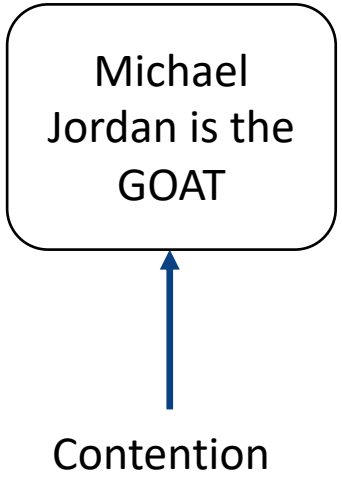
1. Colonel Chutney was killed.
2. Ms Partridge strangled Colonel Chutney with a rope in the ballroom
3. Ms Partridge killed a man.
4. Ms Partridge killed Colonel Chutney.
5. Colonel Chutney is dead.

Create a CASE map using abstraction from this argument

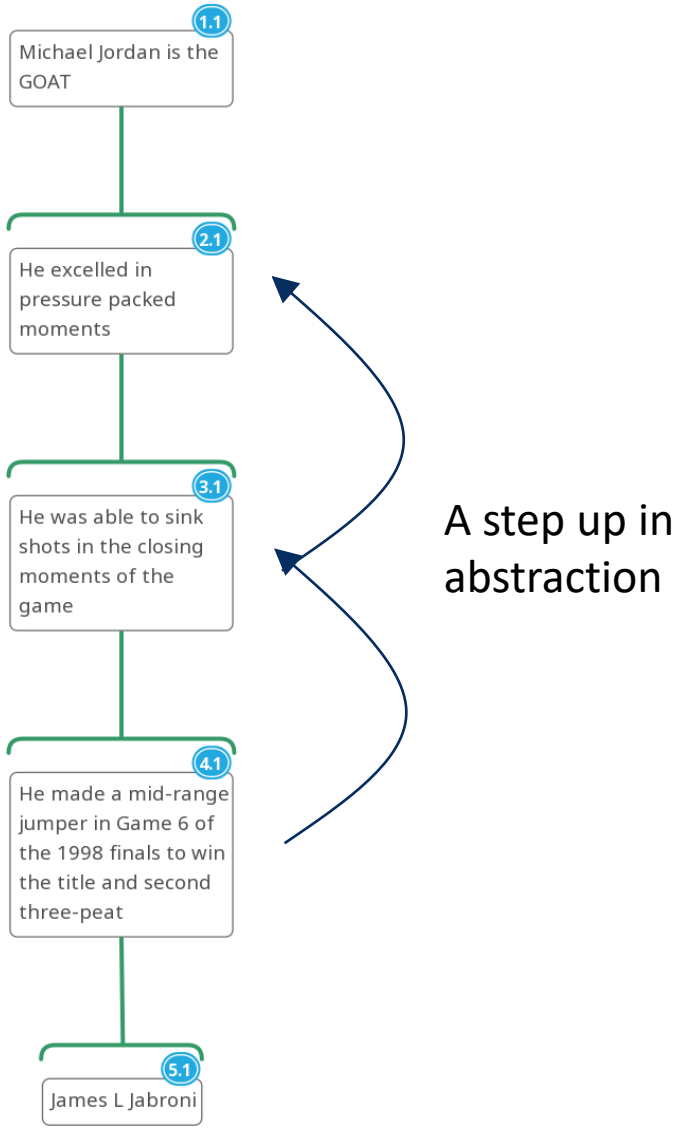
Log in to MindMup (check pg.3 of your workbook for instructions)

Michael Jordan is the greatest basketball player of all time. I was at Game 6 of the 1998 finals, where he made a mid-range jumper in the final seconds to capture the Bulls sixth title and second three-peat. This is just one example where he excelled in pressure-packed moments. He was able sink shots in the closing moments of a game.

- James L Jabroni.



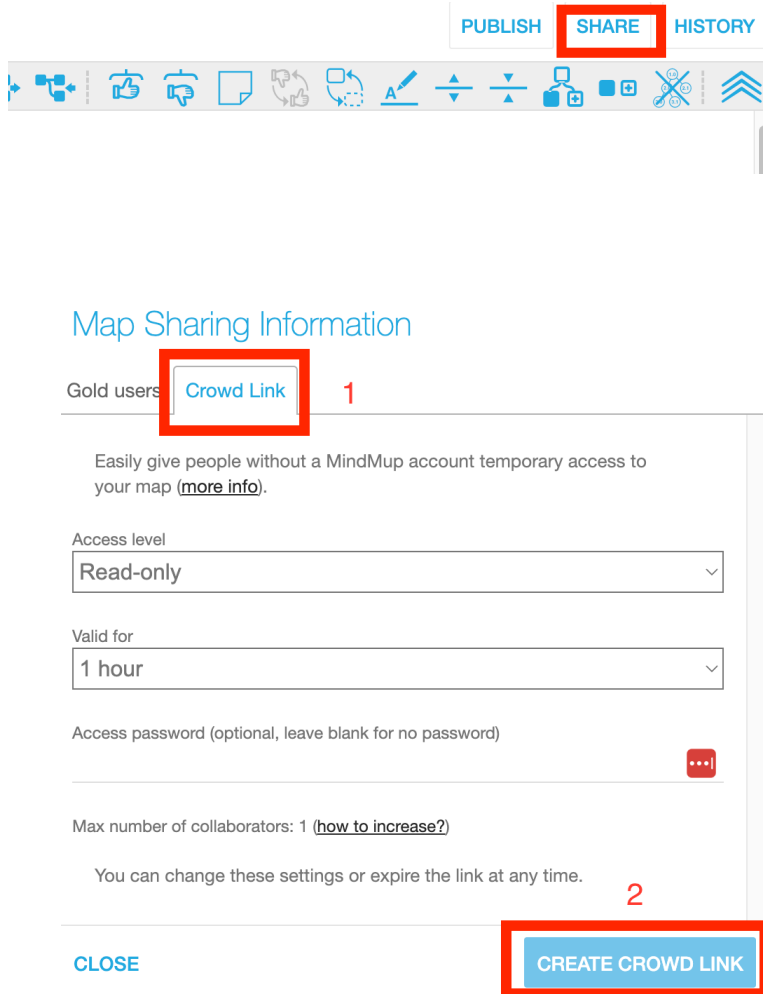
Solution: Michael Jordan is the GOAT



A step up in abstraction

Groupwork

- Teams of 3-5
- One ‘scribe’ to map arguments using MindMup with input from the team.
- Generate one map per team
- When ready, share the link to your map with your tutor.



Time to try creating a *simple* CASE map from scratch!

- Pick a contention and make sure it's something *contentious*, not an established fact. For example, 'Chocolate ice-cream is the best flavor' rather than 'Melbourne is a city in Victoria'.
- Try to have 2 layers of abstraction between your evidence and your contention.
- Don't worry about sourcing your evidence.

Guided group discussion

Some question to consider:

- Does the map go from most abstract to least?
- Is the evidence cited the most specific claim?
- Are there any ‘missing rungs’ in the ladder of abstraction?
- Can you spot an obvious objection?

Next time

In the next session we'll:

- Finish up with the CASE mapping theory – bridging claims and hidden assumptions.
- Use these tools to evaluate some argument maps as a team.