

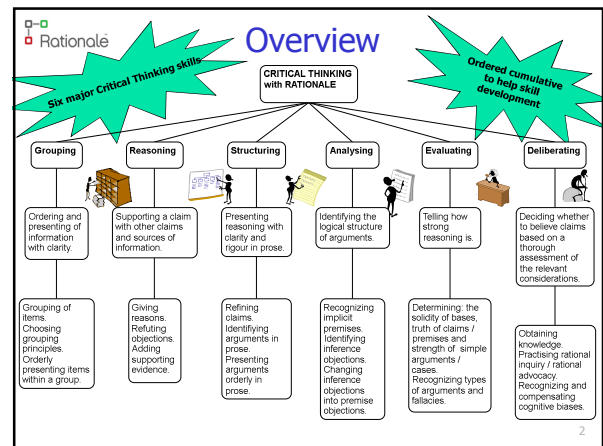
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Critical Thinking: The Art of Reasoning

Lecture 4


Fundamentals of Reasoning I

© Critical Thinking Skills BV



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What's an argument...?



write down your initial thoughts

3

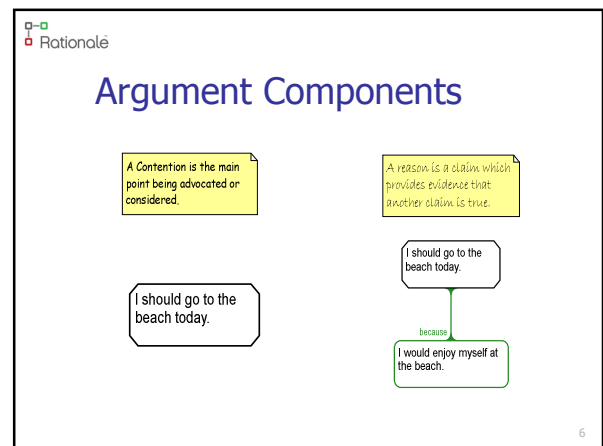
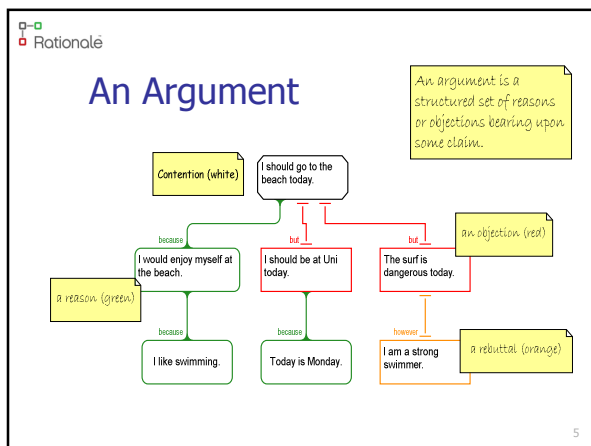
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Some ideas...



<http://www.scottberkun.com/images/40-1.jpg>

4



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Argument Components

An objection is a claim which provides evidence that another claim is false.

A rebuttal is an objection to an objection. That is, it seeks to provide evidence that an objection used by someone is actually false.

I should go to the beach today.

but

The surf is dangerous today.

but

I should be at Uni today.

however

I am a strong swimmer

7

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Other key concepts

A claim is a statement that someone puts forward as true. In a reasoning map, a claim may be the position, a reason, an objection or a rebuttal.

I should go to the beach today.

I should be at Uni today.

I would enjoy myself at the beach.

A proposition is a thought that is capable of being true or false.

8

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Important!

All claims must be stated as propositions

9

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Noughts and Crosses


X		X
	O	

10

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4 x 4 Noughts and Crosses

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16



1986

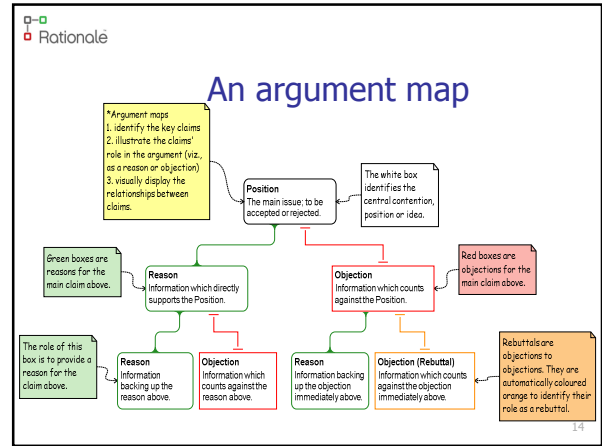
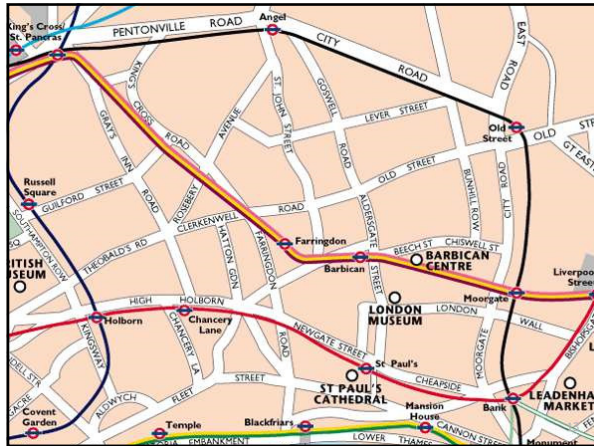
"Mr. Osborne, may I be excused? My brain is full."

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Pentonville Road runs from east to west, then turns into City Road, which comes to a T-junction where East Road meet Moorgate City Road. Running roughly south from Pentonville Road is first Gray's Inn Road and then King's Cross Road, which turns into Farringdon Road after the intersection with Clerkenwell Road. Where Pentonville Road turns into City Road, St. John's Street runs south. As you go along City Road, you come to Goswell Road (which turns into Aldersgate Street) and Bunhill Row running south. As you go down Gray's Inn Road, the first intersection is with Guildford Street, which continues to a T-junction with King's Cross Road. The next intersection, as you continue down Gray's Inn Road, is with Theobald's Rd, which at that point turns into Clerkenwell Road, though you could veer of NE along Rosebery Avenue which crosses King's Cross Road before it joins St. John's Street near the junction of Pentonville Road and City road. Gray's Inn Road terminates at High Holborn, a major E-W road which, as you go east, turns into Newgate Street and then Cheapside. **St. Paul's Cathedral** is between Newgate Street and Fleet Street, which runs roughly parallel to Newgate. Southampton Row goes south intersecting with Guildford Street, Theobald's Road and High Holborn, where it becomes Kingsway, which continues south to a T-junction with the curve of Aldwych, which begins and ends on Fleet Street. From Rosebery Road you can head east along Lever Street, which crosses St. John's Street and Goswell Road before finishing at Bunhill Row where it meets City Road. Heading south down St. John's Road, you cross Lever Street and then Clerkenwell Road. Goswell Road also crosses Lever Street and Clerkenwell Road (which at that point becomes Old Street). Goswell Road becomes Aldersgate Street. Hatton Garden goes between Clerkenwell Road and High Holborn. Streets running south from High Holborn are Kingsway, Chancery Lane and Farringdon Road. Chancery Lane is a short street finishing at Fleet Street. Fleet Street ends at a large intersection just east of St. Paul's. Aldersgate Street continues past **London Museum** (which is at the corner of Aldersgate and London Wall) down to Newgate Street. Beech Street runs E from Aldersgate, turning into Chiswell Street before it meets City Road. East Road runs south, past the intersection of City Road, over Old Street and London Wall, where it becomes Moorgate Street.

12



Argument Mapping

Argument mapping is a way to visualise your thinking. It structures your reasoning so that you can be clear about what the claims are, together with the role that each claim plays in an argument.

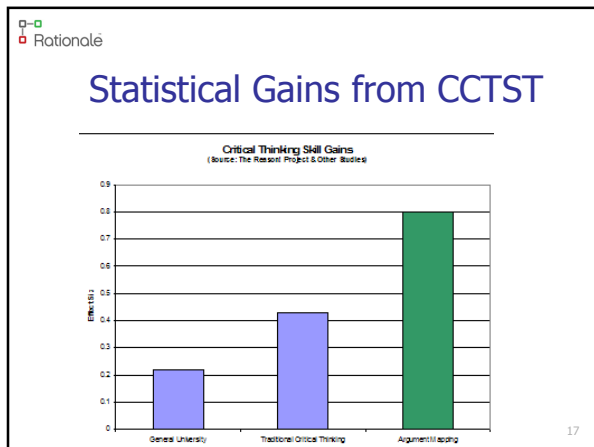
15

Does argument mapping work?

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Department of Philosophy

Reason!Able

16



The argument map process

- We may be faced with an issue or problem that we need to make a determination upon.

18

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Example 1

Acme is concerned about its image and wants to be perceived as healthy in the eyes of health-conscious consumers. Acme has decided to make their puddings healthier without compromising profit or taste by replacing its sugar content with an artificial-sweetener.

Do you think Acme puddings would be perceived as healthy?


19

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Building the Argument Map

Steps:

1. What's the position – remember to formulate the claim as a proposition – something that can be true or false.



Acme puddings would be perceived as healthy if they replaced sugar content with an artificial sweetener.

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2. Identify the main reason/s to support or provide evidence for the position.

Acme puddings would be perceived as healthy if they replaced sugar content with an artificial sweetener.

because

Consuming less sugar is perceived as good for our health.

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3. Identify the main objection/s to oppose or provide evidence that the position is false.

Acme puddings would be perceived as healthy if they replaced sugar content with an artificial sweetener.

but...

Food with artificial sweeteners is not perceived as good for our health.

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4. Consider further reasons and objections which support the main reason/s and objection/s already identified.

Acme puddings would be perceived as healthy if they replaced sugar content with an artificial sweetener.

because

Consuming less sugar is perceived as good for our health.

?

?

but...

Food with artificial sweeteners is not perceived as good for our health.


?

?

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5. Is there any other reasons or objections which support or refute another claim?



Acme puddings would be perceived as healthy if they replaced sugar content with an artificial sweetener.

because

Consuming less sugar is perceived as good for our health.

?

?

but...

Food with artificial sweeteners is not perceived as good for our health.

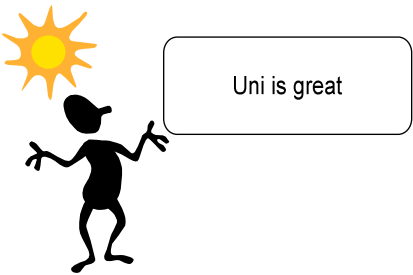
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24

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Example 2




Uni is great

25

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Example 3



www.cinemas-online.co.uk/.../militia.jpg

26

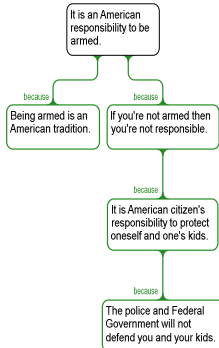
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The argument

'[Being armed] is an American tradition. It is an American responsibility to be armed because if you're not armed then you're not responsible. Whose going to defend your kids – the cops? The Federal Government? No. It's your job to protect you and yours, if you don't do it, you're in dereliction of duty as an American. Period.'

27

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graph TD
    A["It is an American responsibility to be armed."] -- because --> B["Being armed is an American tradition."]
    A -- because --> C["If you're not armed then you're not responsible."]
    C -- because --> D["It is American citizen's responsibility to protect oneself and one's kids."]
    D -- because --> E["The police and Federal Government will not defend you and your kids."]
  
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28