

Decision-Making under Uncertainty

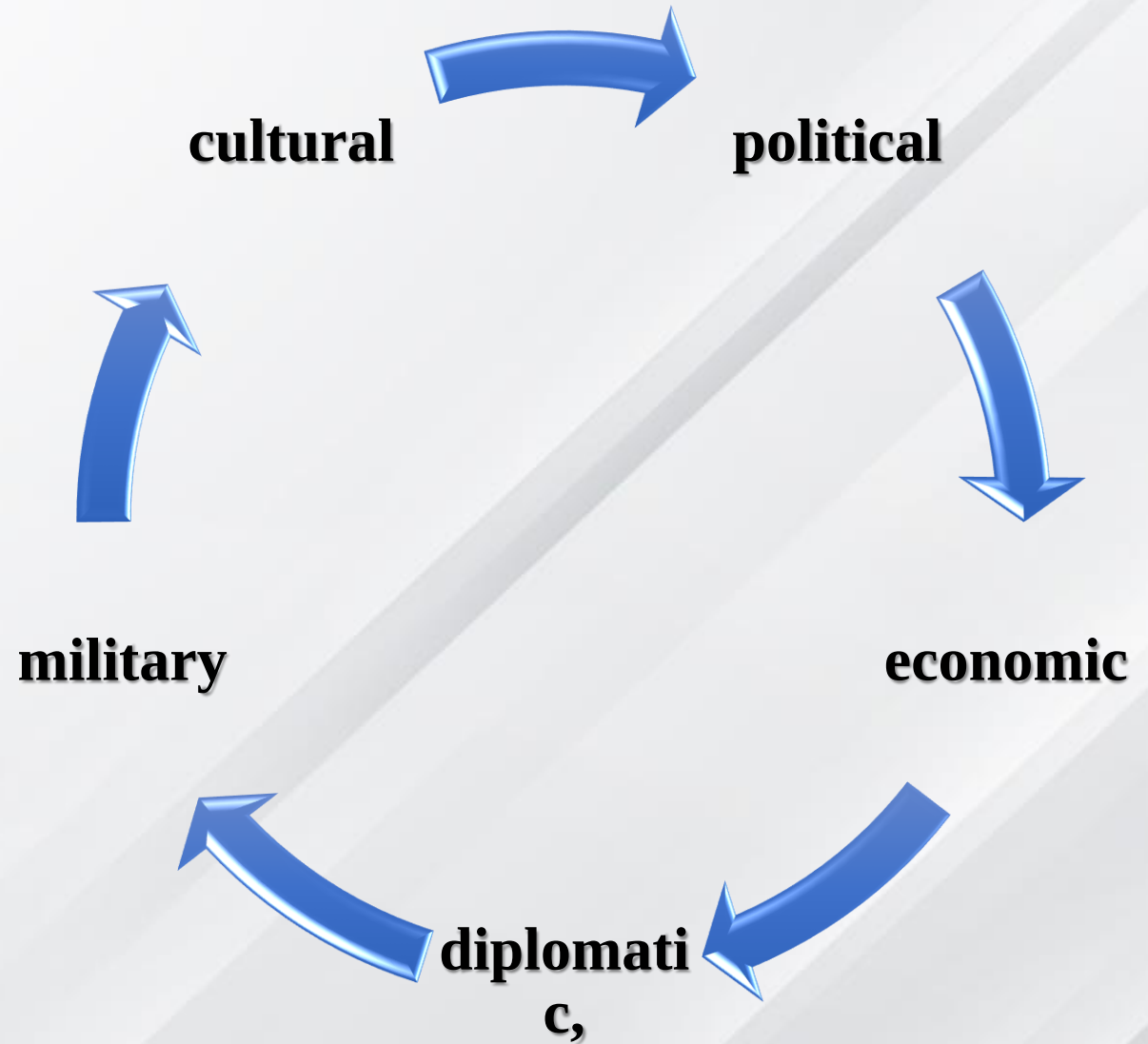
Prepared by Dr. Injy Nashaat

Lecture 3



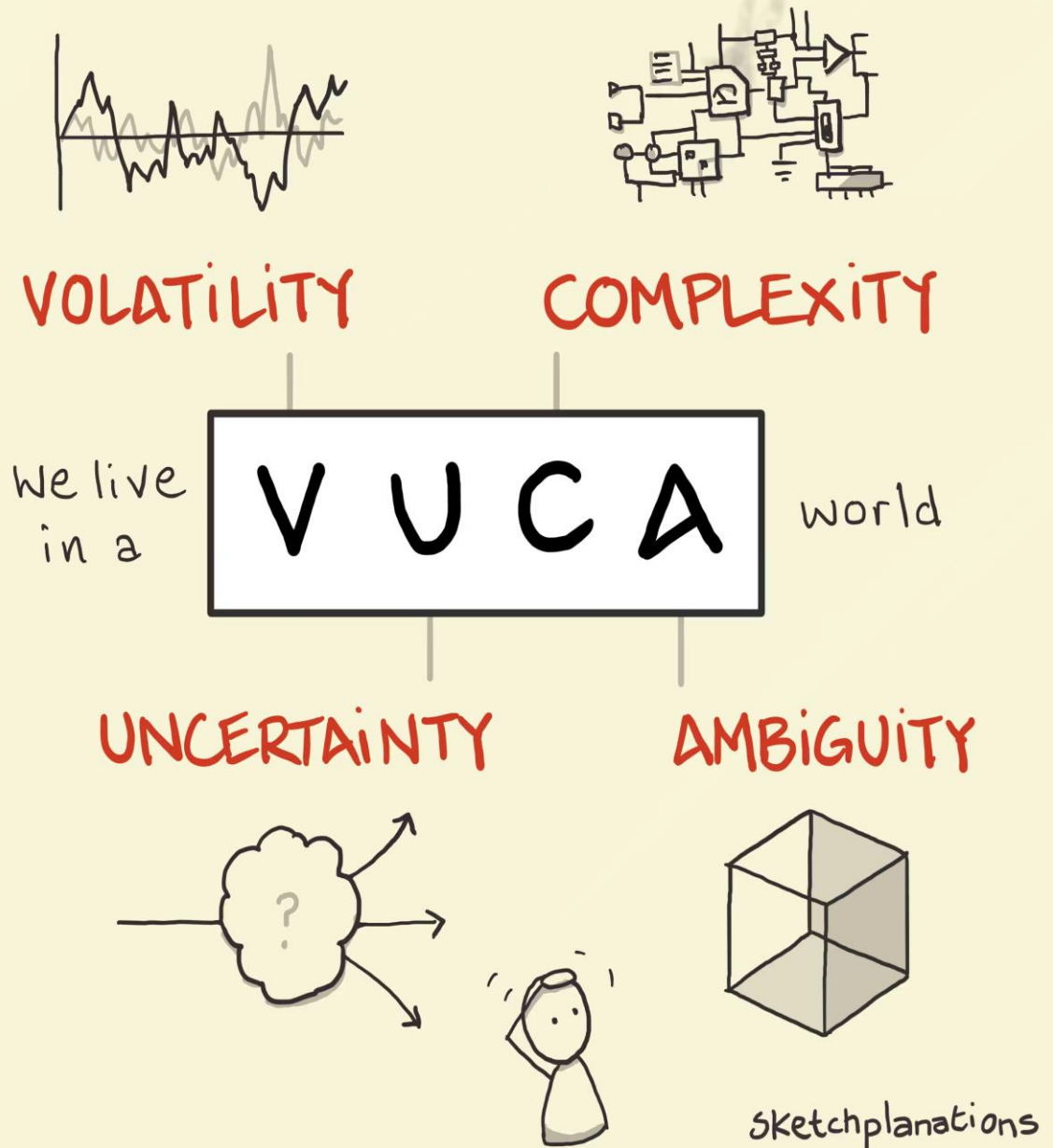
Decision-Making under Uncertainty

We must use what has been called ‘smart power’: the full range of tools at our disposal



Today's strategic environment is increasingly characterized by threats that are both diffuse and uncertain, where conflict is inherently unpredictable, and where our capability to defend and promote our personal, corporate and national interests may be restricted by political, diplomatic, informational and economic constraints. ie it has

volatility, uncertainty, complexity, and ambiguity (VUCA)



Instead of the hierarchically focused, linear strategic thinking that has dominated traditional decision-making, the turbulent VUCA environment requires non-linear cognitive competencies characterized by the ,ability to recognize changes in the environment; to determine what is new and what must be learned to be effective. In this environment, effective strategic leaders must recognize which decision factors are most important in relation to the big picture, must be able to identify and prioritize alternatives, integrate information from a variety of sources, and detect trends, associations and cause-effect relationships.

Strategic thinking

```
graph TD; A[Strategic thinking] --- B[seeks hard, fact-based, logical information]; A --- C[questions everyone's unquestioned assumptions]; A --- D[is characterized by an all-pervasive unwillingness to expend resources]; A --- E[is usually indirect and unexpected rather than head-on and predictable];
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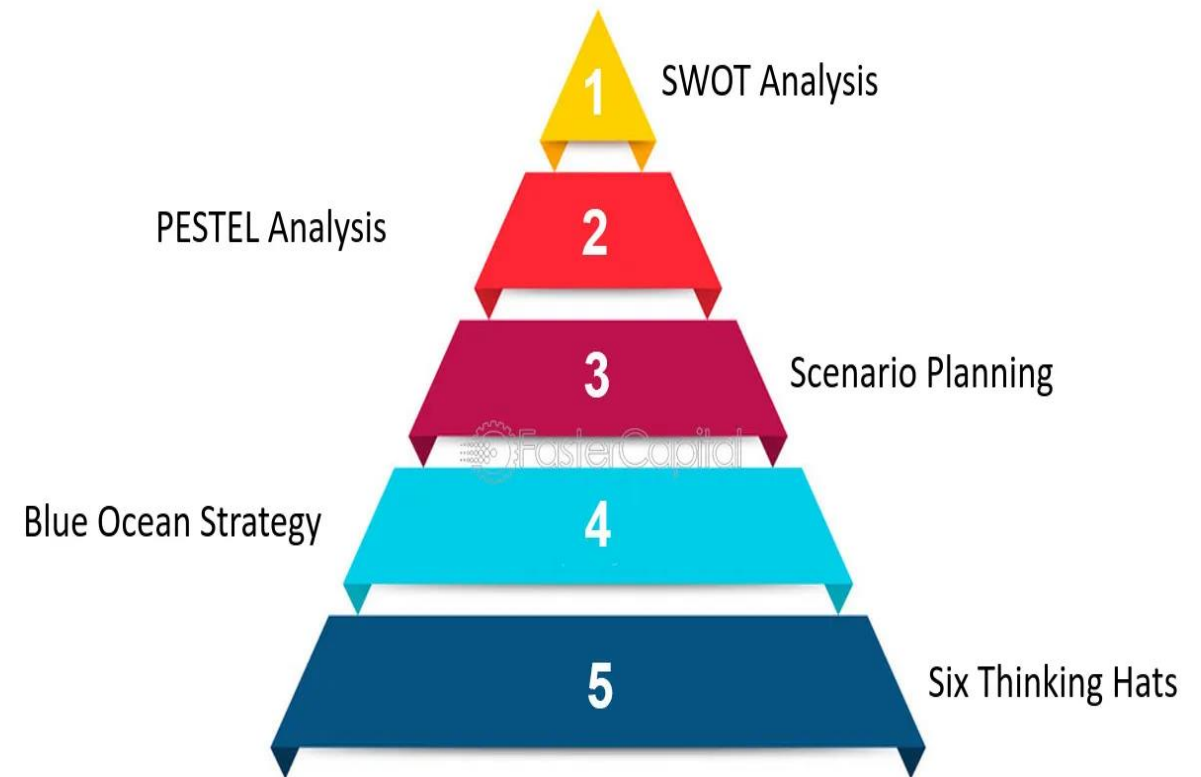
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How can the organization develop strategic thinkers who can operate effectively in the complex and uncertain contemporary security environment?

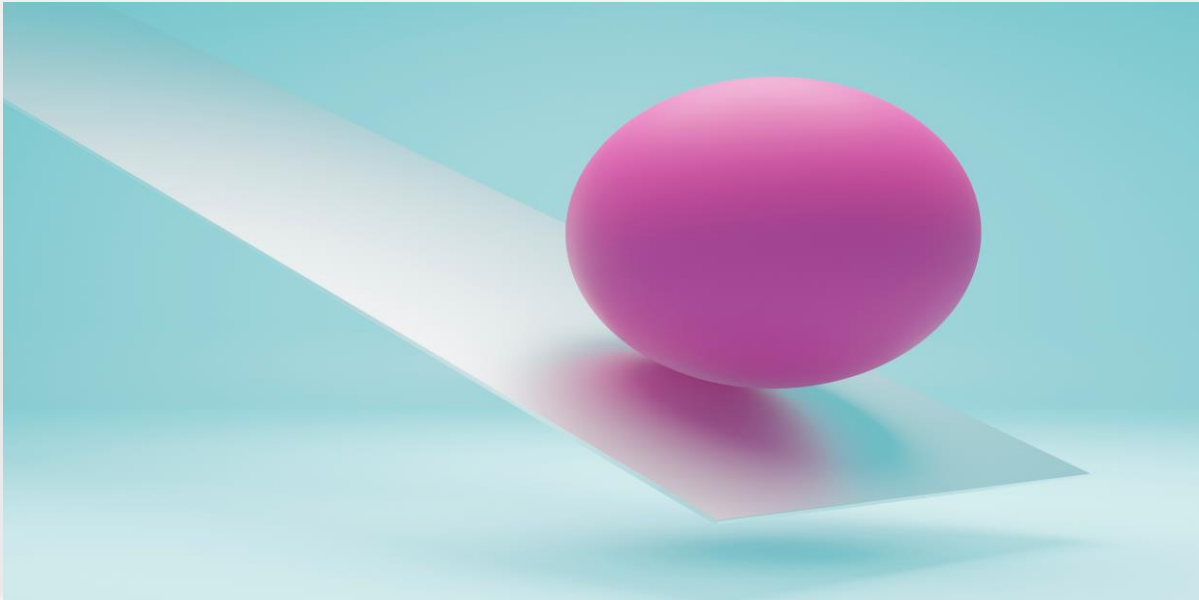
Strategic thinking improves decision-making. Leaders can evaluate options in the context of overall goals and objectives, leading to more effective and coherent decisions. By thinking strategically, leaders can encourage creative solutions and adapt to changing environments, keeping the organization competitive.

Strategic Thinking Tools and Techniques



Strategic Thinking Strategy

It is the disciplined calculation of overarching objectives, concepts, and resources within acceptable bounds of risk to create more favorable future outcomes than might otherwise exist if left to chance or the hands of others. Strategy emerges over time as intentions are adjusted to accommodate changing realities. Strategy also provides rational direction for courses of action intended to maximize desired and minimize undesired outcomes in each context.



Provides a Clear
Direction

01

Encourages Innovation

02

Enhances Decision
Making

03

Builds Resilience

05

Fosters Collaboration

04

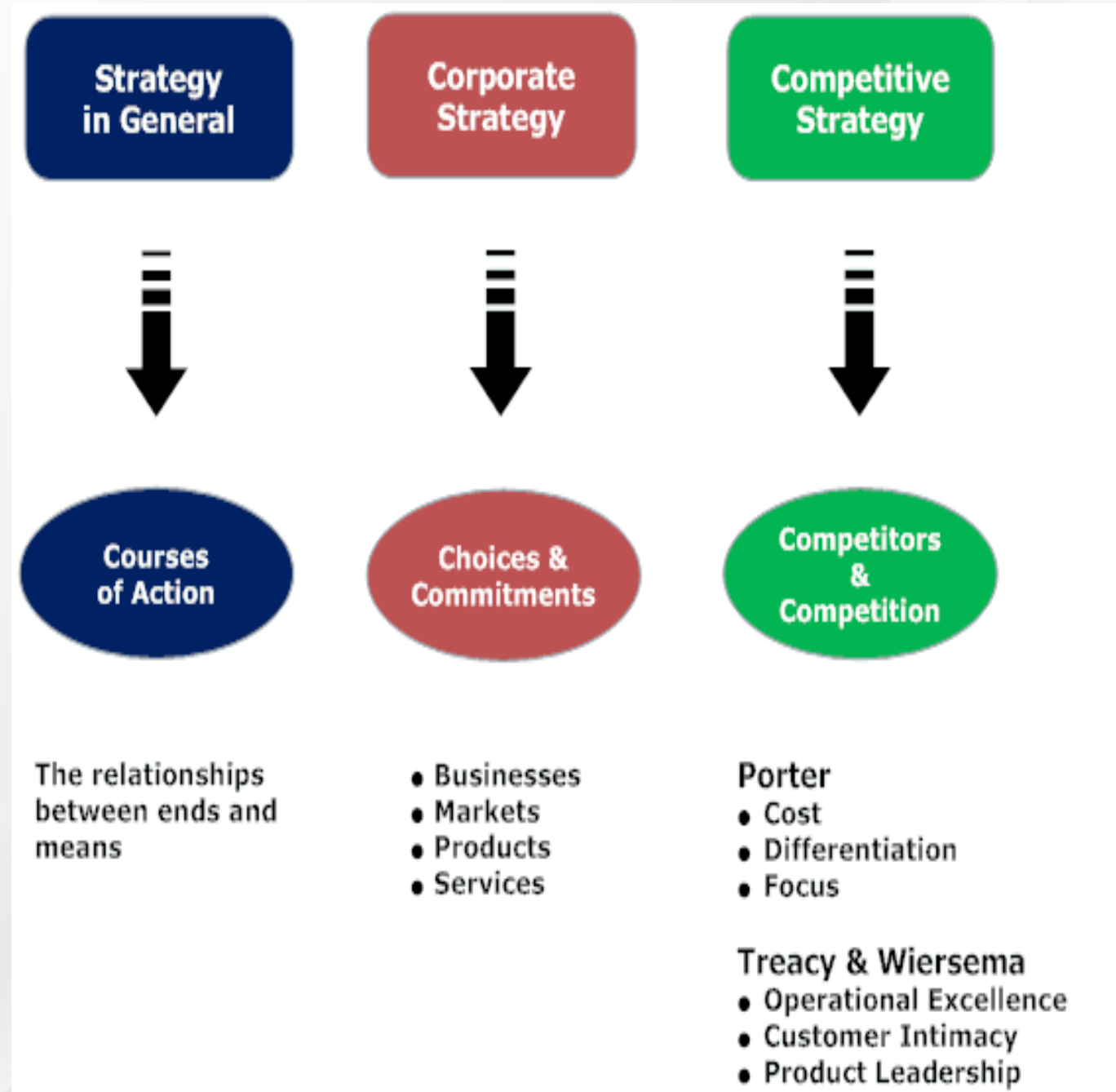
FasterCapital

Nickols defines strategy along four dimensions: perspective, position, plan and pattern. It is,

the bridge between policy or high-order goals on the one hand and tactics

or concrete actions on the other.

Strategy and tactics together straddle the gap between ends and means.





- ✓ In short, strategy is a term that refers to a complex web of thoughts, **ideas**, **insights**, **experiences**, **goals**, **expertise**, **memories**, **perceptions**, and **expectations** that provides general guidance for specific actions in pursuit of ends.

- ✓ Strategy is at once the course we chart, the journey we imagine, and, at the same time, it is the course we steer, the trip we make. Even when we are embarking on a voyage of discovery, with no destination in mind, the voyage has a purpose, an outcome, an end to be kept in view



Critical Thinking

✓ **Analysis**

✓ **Evaluation**

✓ **Implication**



Why do we think?

1. To decide what to do
2. To decide what to believe
3. ~~For fun (stories and jokes).~~

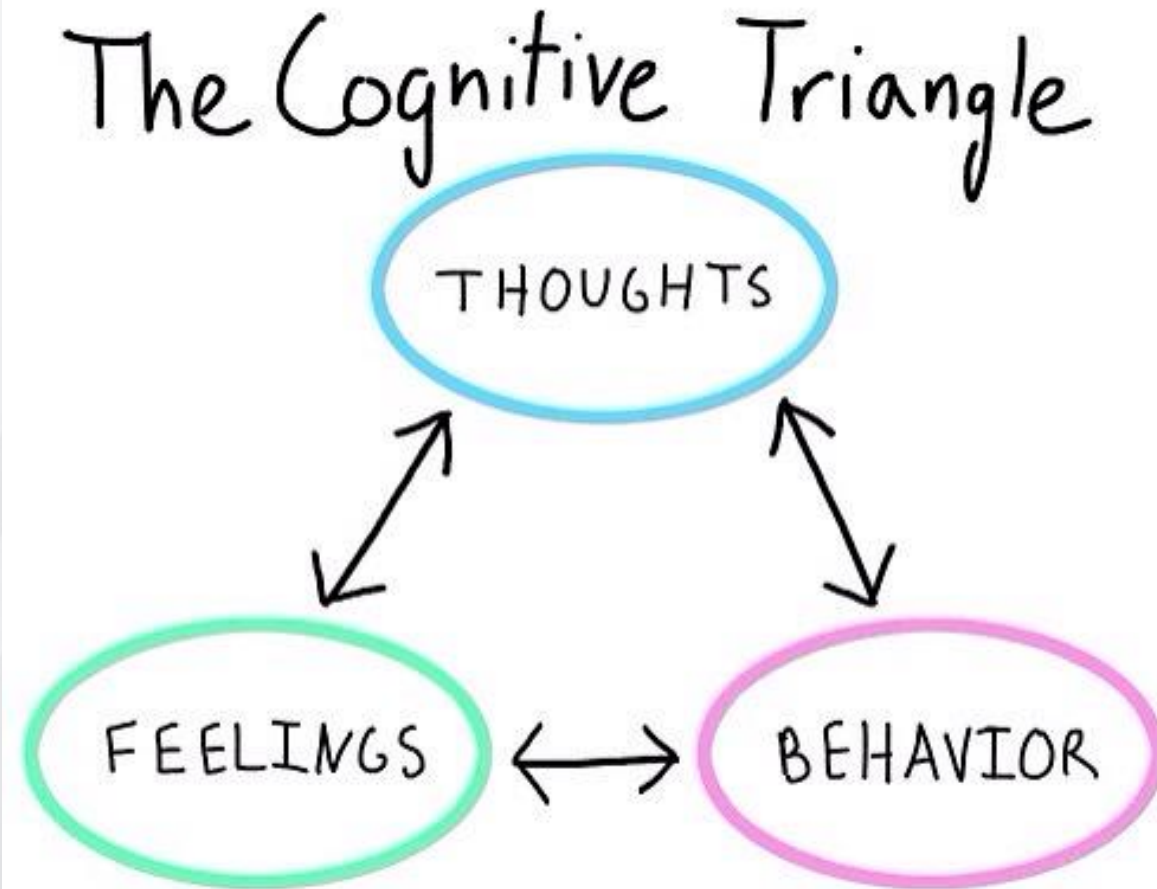


If we genuinely care about our decisions, 1 and 2 tend to activate the careful, logical, reasonable part of our mind – a part of our mind that is important for quality critical thinking in psychological science. Quality critical thinking is not a prerequisite for 3.

We think to decide what to do

- scientists think carefully and logically.
- We all do this whenever we care about your decisions.
- Consider an important decision:
 - “I should buy a dog”

How do we arrive at our final decision in this context?



We think to decide what to believe

- ❑ But our ultimate decision about what to do very often hinges upon our decision about *what we believe*. For example, what would make you believe the statement: Dogs are peoples' best friend?
- ❑ Consider a list of reasons





**You don't have to
see it to believe it.
Believe it, and
you will see it.**

– Renée Fishman

mymeadowreport.com

[@reneefishman](https://twitter.com/reneefishman)

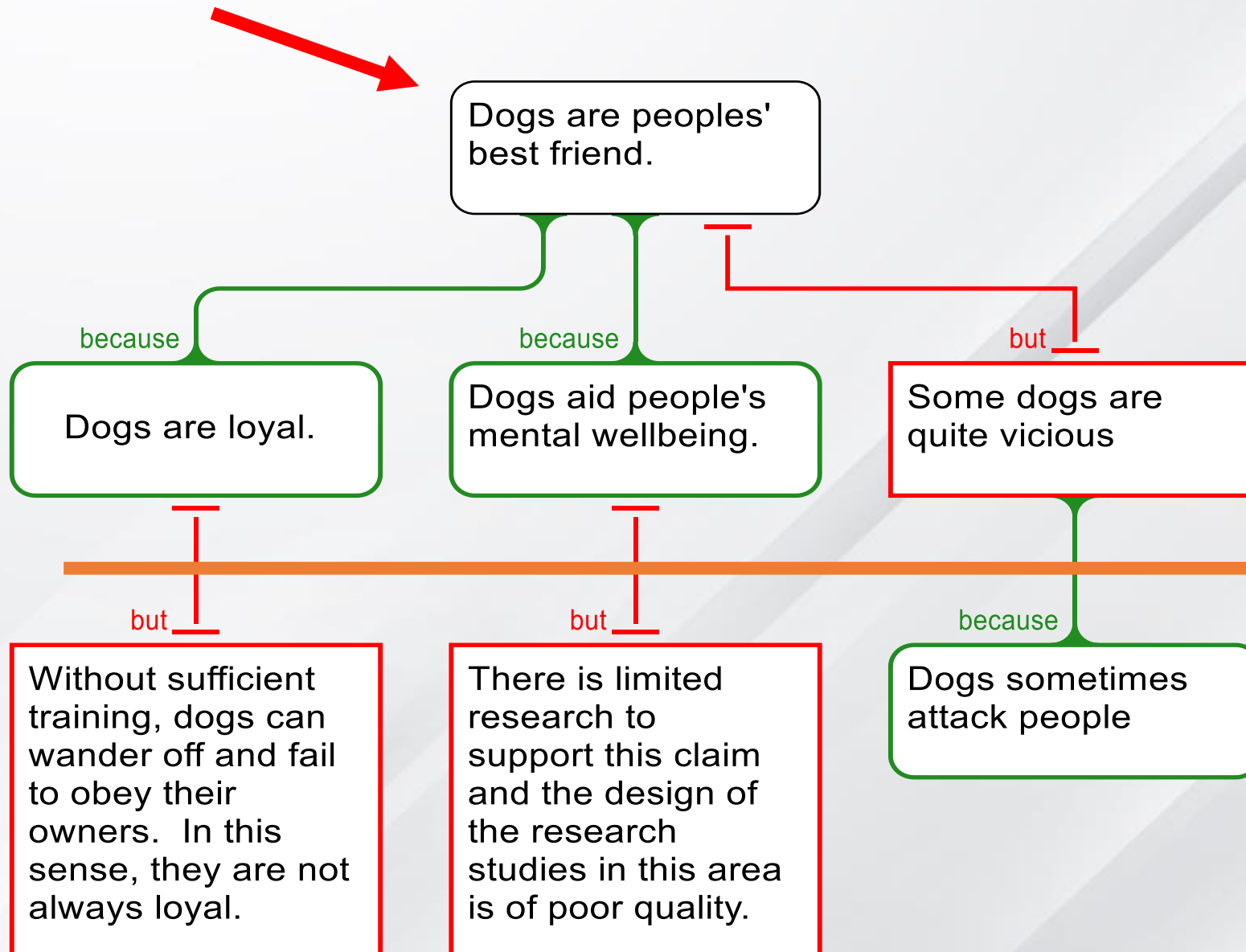
How do we ultimately decide what to believe in this context?

Questioning our beliefs: adding **but** to **because**.

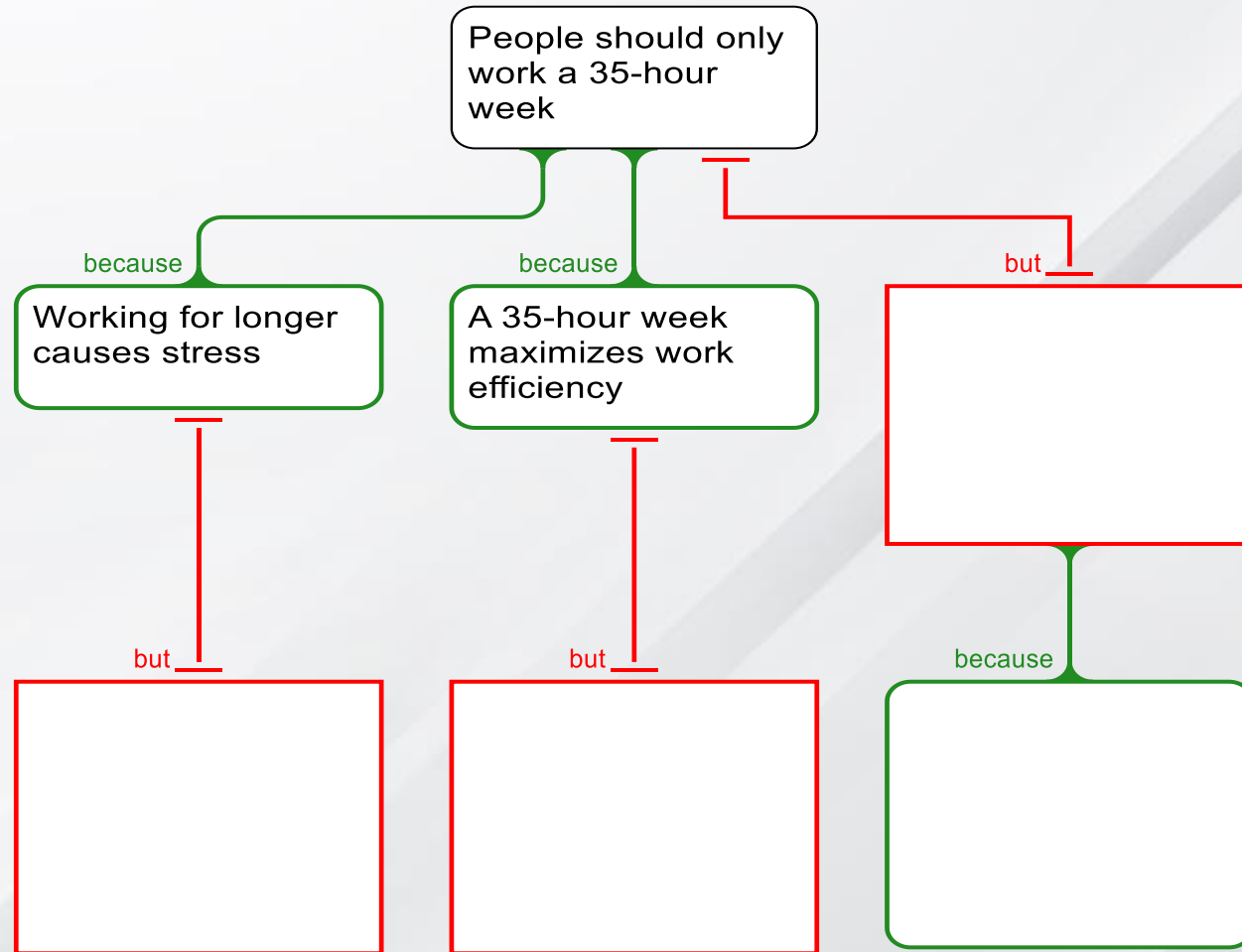
- When deciding what to believe, we need to be careful not to focus only on reasons for accepting our beliefs.
- We should avoid simply working to confirm our beliefs (confirmation bias).
- We need to question our beliefs and the reasons we provide as a basis for our beliefs.
- We need to be sceptical.

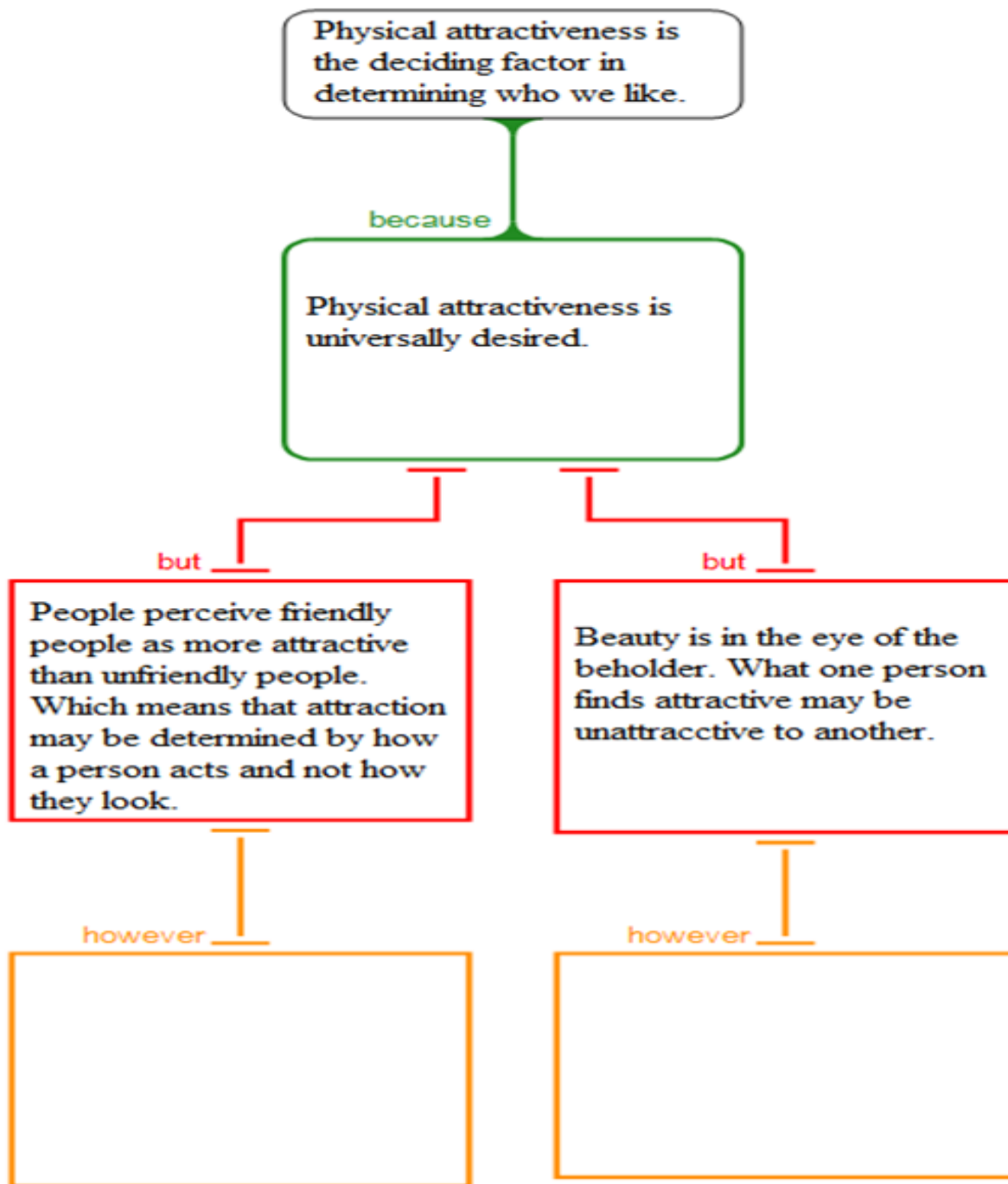


Questioning our beliefs: adding **but** to **because**.



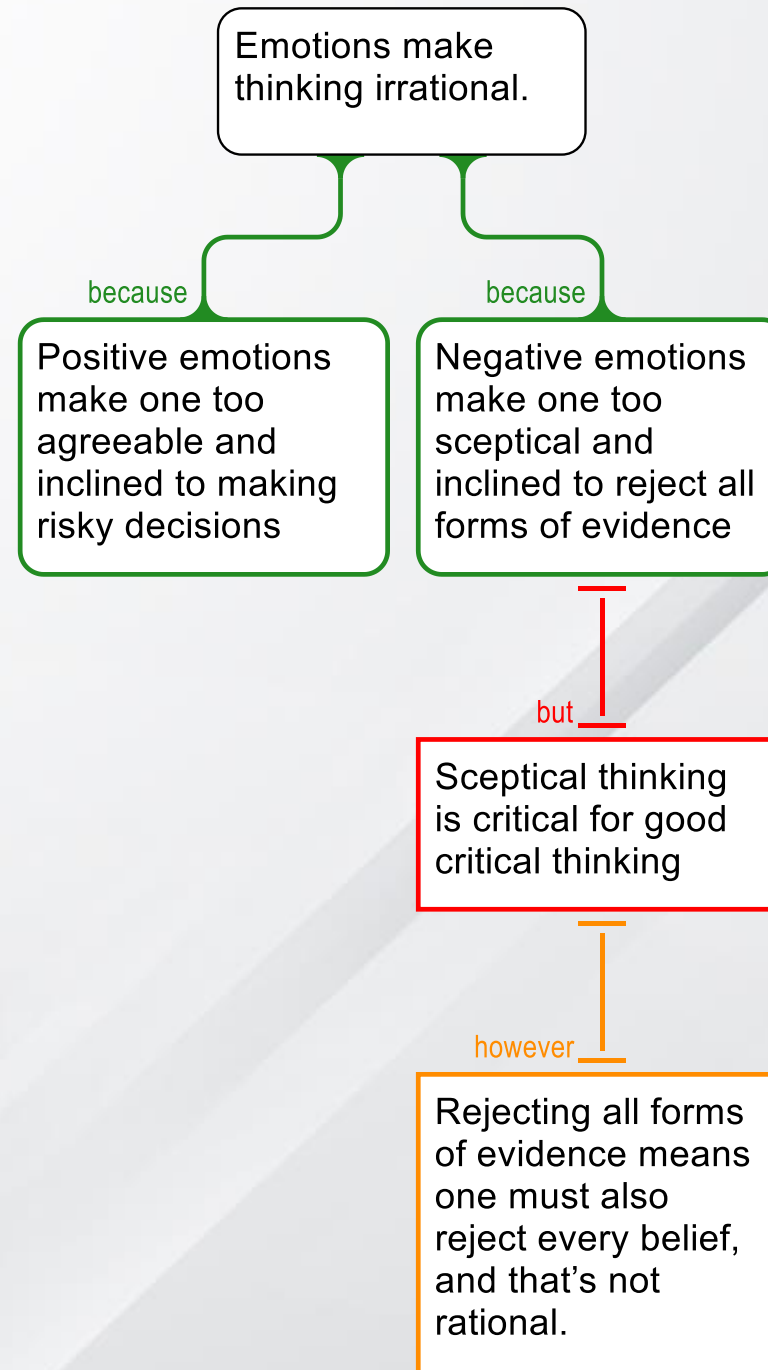
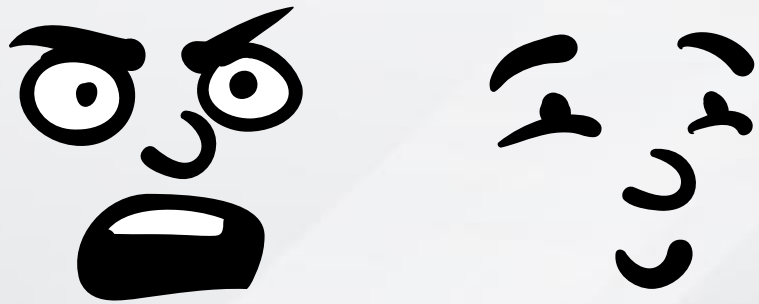
Consider a different belief
(with the same argument structure as previous slide). Try
adding **but** to **because**.





- People don't always tell you the basis of their beliefs. You often must ask people why they believe what they believe.
- But whenever they do provide an explanation, you can unpack (analyse and evaluate) the basis of their belief.
- How?

**Now think back to
the last example and
consider the structure
of this argument.**



Consider arguments that reject the claim that emotions make thinking irrational:

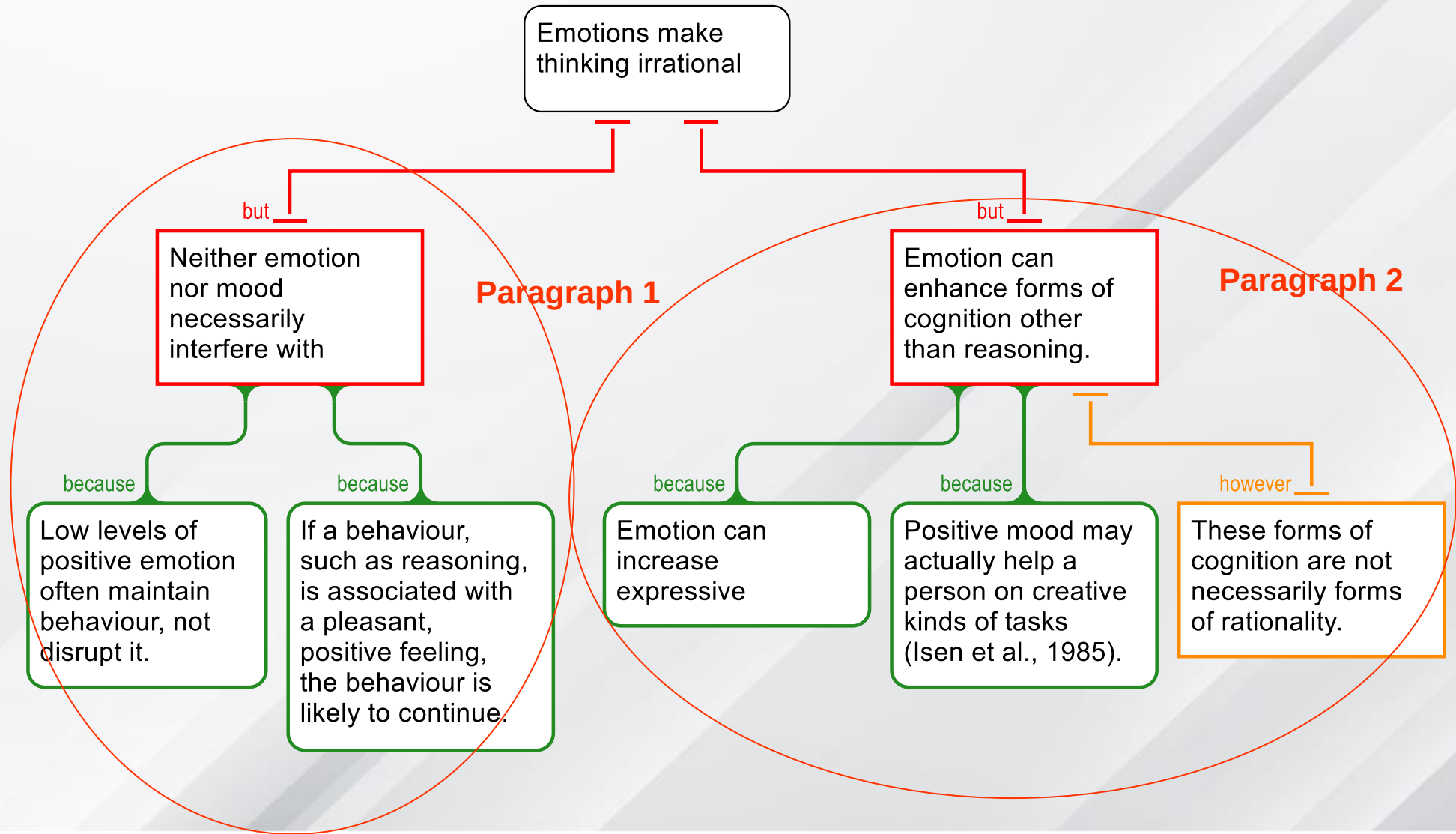
Paragraph 1

A commonly held belief is that emotions make thinking irrational. However, some people argue that neither emotion nor mood necessarily interfere with rational thought. For example, researchers have found that positive emotion often maintains behavior, not disrupts it. Thus, if a behaviour, such as reasoning, is associated with a pleasant, positive feeling, the behaviour is likely to continue.

Paragraph 2

Also, emotion can enhance cognitive skills other than reasoning. For example, emotion can increase expressive communication. Also, a positive mood may help a person on creative kinds of tasks. However, these forms of cognition are not necessarily forms of rationality.

There are two major objections to the central claim, both of which have a **separate paragraph**, both of which are supported by sub-claims, and one of which has a rebuttal.



Identifying types of arguments and considering the strength of each type

- People don't always tell you the sources or **types of arguments** they are using.
- However, once you become familiar with the different types of arguments, we *can* use to support our beliefs, you will come to know what types of arguments another person is using.
- This helps you to **evaluate** their arguments, because not all argument types are equal – some are better than others.

Inductive

Using specific observations to form a general conclusion



VS

Deductive

Using a general premise to form a specific conclusion



Inductive
Reasoning

OBSERVATION

or

EXPERIMENT



Generalizations



PARADIGM

or

THEORY

Deductive
Reasoning



Predictions





Deductive Reasoning

- The **strength** of deductive reasoning is that conclusions derived with it are fully certain.
 - The **weakness**, which was illustrated in the most recent example, is that no new information is added.
 - The fact that the penny in my pocket is a copper disc with Lincoln on it was clear from the initial data, so the conclusion hasn't added any new information.
- 
- 



Inductive Reasoning

- The **strength** of inductive reasoning is that new information can be stated.
 - The **weakness** is that the new information cannot be proven.
- 
- 

Evaluation

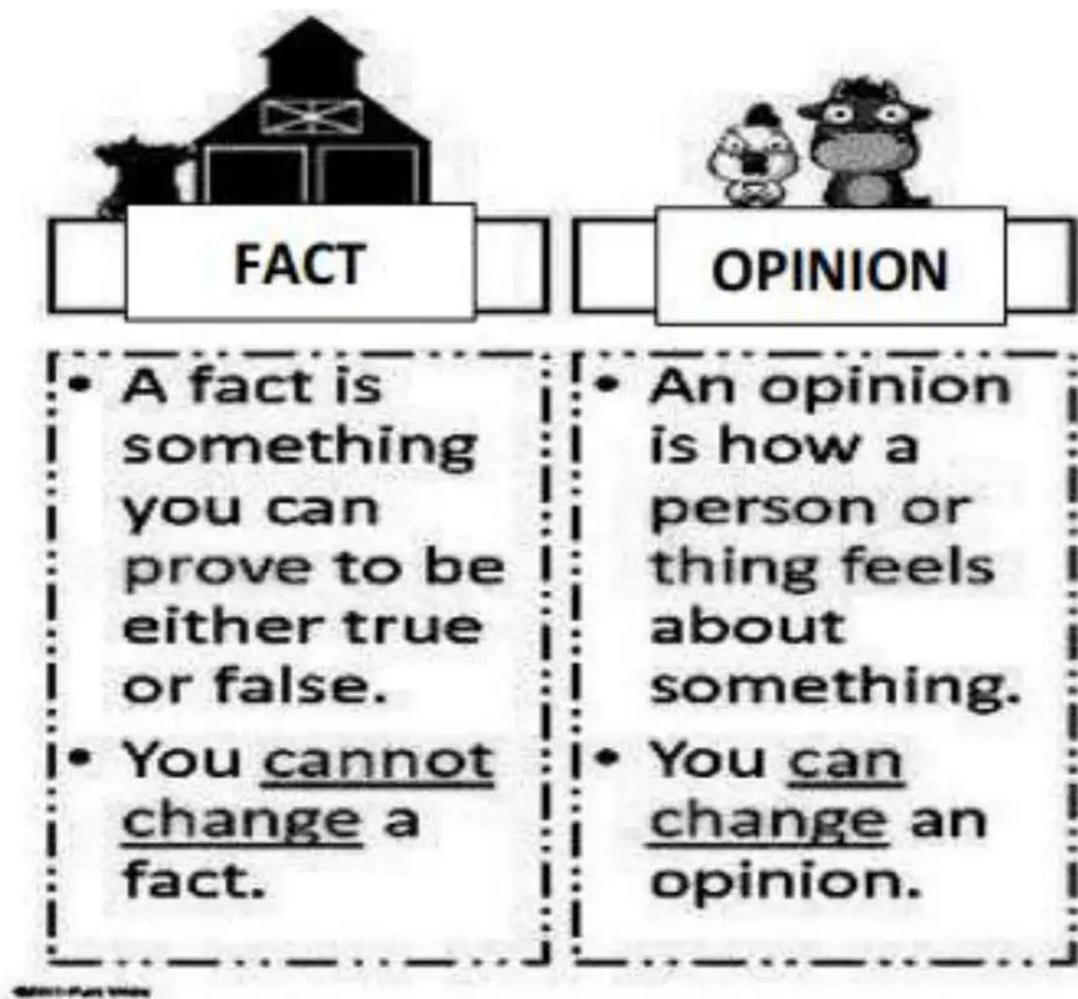
- When we evaluate:
 - (1) We assess the **credibility** of arguments
 - (2) We assess the **relevance** of arguments
 - (3) We assess the **logical strength** of an argument structure
 - (4) We assess the **balance of evidence** in the argument

Our objective is to arrive at some conclusions about the overall strengths and weakness of an argument.





**Methods of Philosophy
Lead to Wisdom and
Truth**



What I Know

Direction: Give a brief answer to the following question. Write your answer in the space provided.

1. Give 5 examples of Factual statements and 5 examples of opinion.

FACTS/EVIDENCE

AND

OPINIONS/CLAIMS

DEFINE A FACT?

- A **fact** is a true statement.



TWO Qualities of Facts

- A **fact** has evidence, or proof.
- A **fact** can be observed.



FACTS...

1. Contain data and research.



2. Include numbers, dates, and ages.



3. Can be proved through experiment or observation.



LOCATE a Fact

- Dictionary
- Map
- Encyclopedia
- Website
- Book



TURN AND TALK...

DEFINE fact/evidence.



- **Where can you find facts/evidence?**

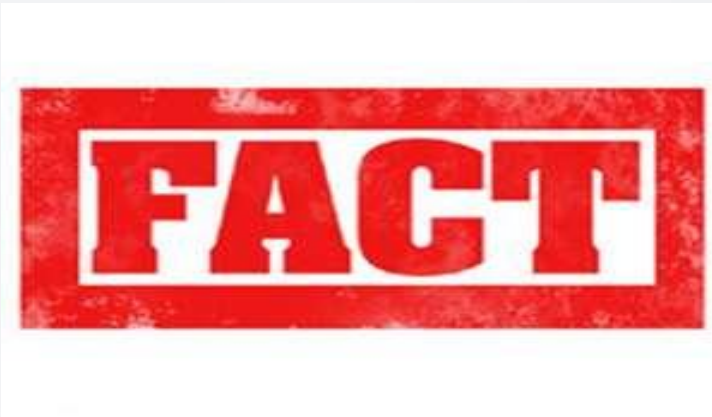
Show **WHAT YOU KNOW**

- IDENTIFY **one** location where you can find a **fact/evidence**?



Let's Practice

Write **facts** about **YOU!**



Define an Opinion

- An **opinion** is a statement that shows what a person **thinks, feels, or believes**.



TWO Qualities of An Opinion

- An **opinion** has a personal belief, or a **claim**.
- An **opinion** can't be proved.

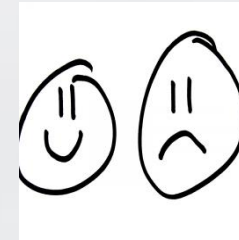


OPINIONS/CLAIMS...

- Contain **beliefs** and **thoughts**.



- Have emotional language (**should**, **best**, and **worst**).



- Cannot be proved.



TURN AND TALK...

- **DEFINE** an **opinion/claim**.



Show what you know

- **LIST** one quality of an **opinion/claim**.



Let's Practice

- Write your **opinions!**



SO...

How do you tell the difference?

ASK QUESTIONS...

A statement is a **FACT** when you answer YES to:

- Is the statement **true**?
- Can the statement be **proved**?

“Water boils at 212 degrees.”



Look for SIGNAL WORDS!

Facts/Evidence

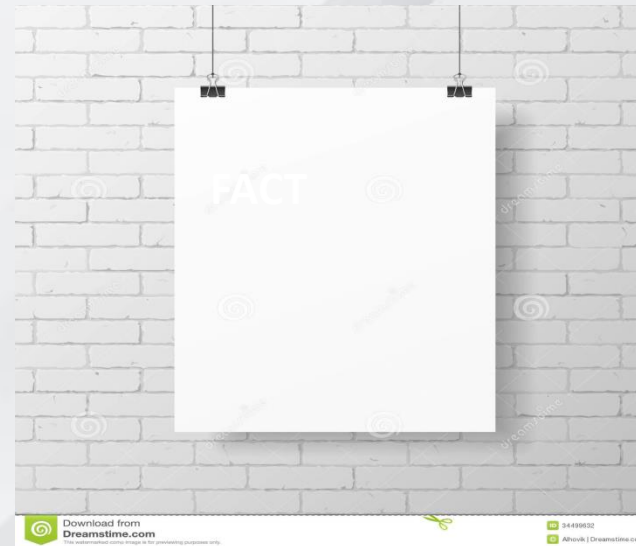
- **On June 2** (specific date),
- **In the year...**
- **According to...**
- **In the article,**
- **The author states,**
- **In the text,**

Opinions/Claims

- **I think...**
- **I believe...**
- **I feel...**
- **In my opinion...**
- **In my point of view...**
- **People should...**

Let's Practice

- Paste your signal words to the **fact/evidence** OR **opinion/claim** poster in the front of the room.



You decide—**Fact** OR **Opinion**

1% of the world's water is drinkable.



Fact

Opinion



مجموعة جامعة
الجميع الذكية
للتعليم القابضة

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Thank You

