

# *The Psychology of Critical Thinking*

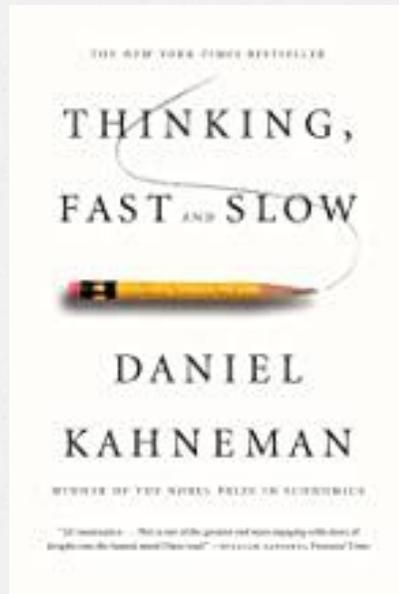
*Tools, Tips and Techniques to  
help you think at your best*

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# Learning Objectives:

- Describe the difference between “usual” thinking patterns and critical thinking
- Self-identify your stage of thinking based on a six-stage process of critical thinking functioning
- Learn tools to promote your critical thinking
- Gain question tools to apply the standards of reasoning
- Practice applying critical thinking tools



**What makes  
thinking  
different?**

Critical Thinking is a  
*self-directed* process  
by which we take  
*deliberate steps*  
to think at the  
*highest level* of quality.

You can't think for others, others can't do your thinking for you

Critical Thinking is a *self-directed* process by which we take *deliberate steps* to think at the *highest level* of quality.

Follows a process so you can explain or write down the steps so others can follow

Conforms to standards of thinking

THE NEW YORK TIMES BESTSELLER  
THINKING,  
FAST AND SLOW  
  
DANIEL  
KAHNEMAN  
WINNER OF THE NBER PRIZE IN ECONOMIC RESEARCH  
"A masterpiece... This is one of the greatest and most enlightening works of thought to be found in the world." —The Economist, "Premier" Issue

*Critical* thinking isn't natural



“Thinking is to  
critical thinking

as walking is  
to ballet”



*--Dr. Enoch Hale, The Foundation for Critical Thinking*

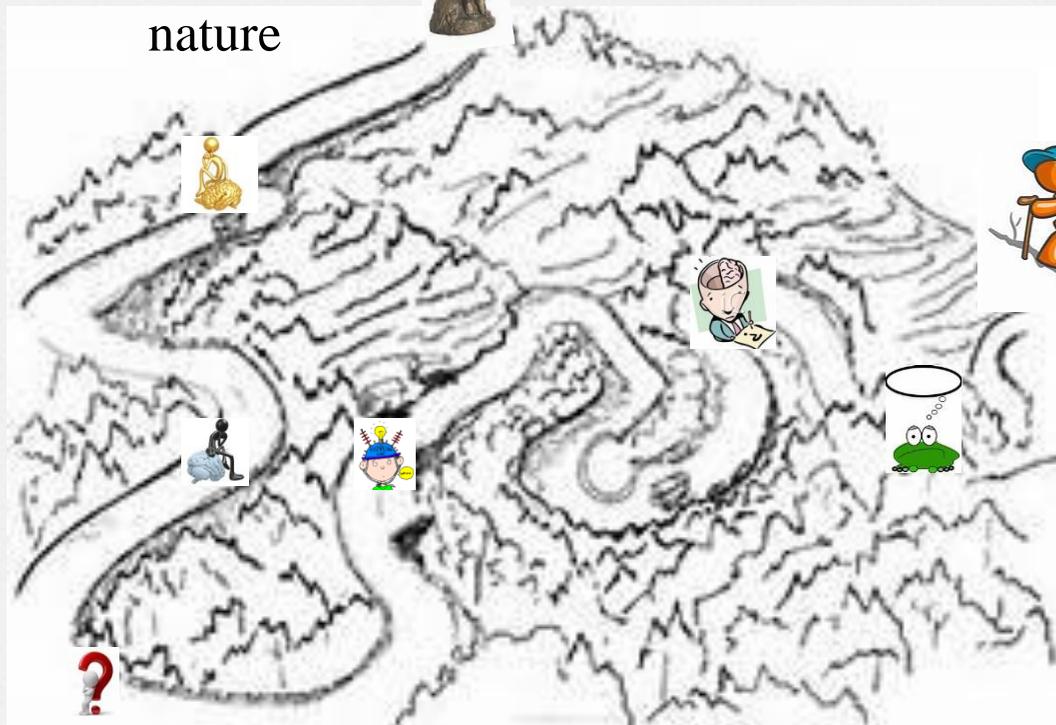


In reality, we are all on a journey of thinking throughout our lives.

Good thinking habits are second nature



# Master Thinker



# Unreflective Thinker

Unaware of significant problems in our thinking

# Unreflective Thinker

Unaware of significant problems in thinking

Draws inferences

Continually makes assumptions

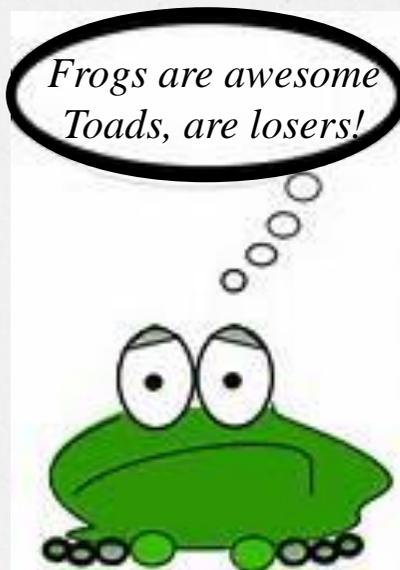
Thinks within a point of view



Sees beliefs as truths

# Unreflective Thinkers

- Cling to beliefs as though they are truths
- Engage in self-deception by creating and maintaining “pleasant illusions”
- Believe their decisions are sound even though they are unconsidered
- Irrationally dismiss ideas because they don’t *want* to change their behavior or comfortable way of looking at things
- Often stereotype others

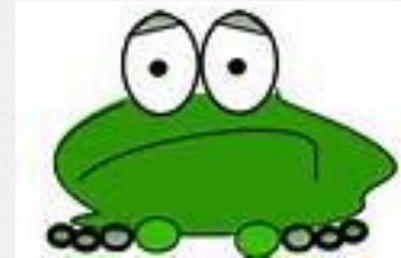


# Unreflective Thinkers in the real life

## In organizational life

...the irrational manager who can't understand why his employees can't "give it up"

...the perpetual procrastinator



## In health

...the teenager who thinks vaping is cool

...the motorcyclist who reasons that helmets obstruct vision, so therefore it must be safer to ride without one.

...the person who thinks they can drive safely while drunk

## In personal life and relationships

...the individual who decides to marry a self-centered person with the thought that he or she will "change" after marriage



# Inference vs. Assumptions



The single mother

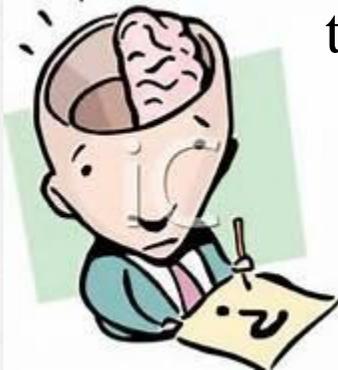


There will be food at th



# Challenged Thinker

Faced with significant problems in our thinking, yet we begin to notice that we:



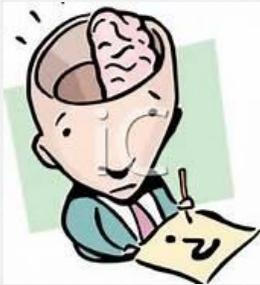
- Make questionable assumptions
- Use false, incomplete, or misleading information
- Make inferences that do not follow the evidence we have
- Think egocentrically and irrationally, reasoning within prejudiced points of view

## Unreflective Thinker

Unaware of significant problems in our thinking



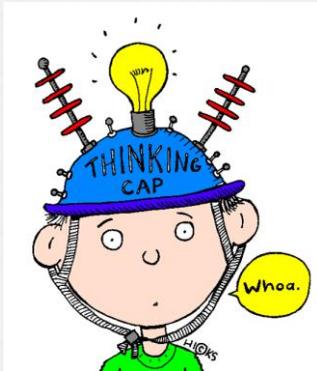
# Challenged Thinker: signs of emerging reflectiveness



- Striving to analyze thinking
- Thinking about assumptions
- Wondering if they are stuck in a certain point of view
- Thinking about issues like “is it logical”, “is it accurate”, “is it precise”, even those these concepts can seem new to them.
- Becoming curious about self-deception, though challenged to find examples from their own life.

*Challenged thinkers often mistakenly believe they are immune to the flaws in thinking, because they have dawning awareness of those flaws.*

# Beginning Thinker



Aware of problems in thinking and trying to improve but without regular practice

- Starts to take thinking seriously and develop “thinking willpower”
- Notice when selfish interests bias viewpoint
- Begins to express clear and precise questions, check information for accuracy and relevance
- Distinguish between information and someone’s interpretation of it



## Challenged Thinker

Faced with significant problems in our thinking

## Unreflective Thinker



Unaware of significant problems in our thinking

# Practicing Thinker



Aware of the need to actually practice thinking and adopt a strategy to practice it

- Tests out different strategies, builds skills
- Reflects on process of thinking
- Uses skills like S.E.E.I
- Considers points from multiple perspectives when evaluating information



## Beginning Thinker

Trying to improve but without regular practice



## Challenged Thinker

Faced with significant problems in our thinking

## Unreflective Thinker



Unaware of significant problems in our thinking

# Advanced Thinker



Keeps up with disciplined practice in thinking and is developing:

- Intellectual humility, autonomy, integrity and courage
- Confidence in reason
- Intellectual empathy and fair-mindedness

## Practicing Thinker

Aware of the need to actually practice thinking



## Beginning Thinker

Trying to improve but without regular practice



## Challenged Thinker

Faced with significant problems in our thinking

## Unreflective Thinker



Unaware of significant problems in our thinking



## Master Thinker

Good habits of thought become 2<sup>nd</sup> nature

## Advanced Thinker

Keeps up with disciplined practice in thinking

## Practicing Thinker

Aware of the need to actually practice thinking

## Beginning Thinker

Aware of problems in thinking and trying to improve but without regular practice

## Challenged Thinker

Faced with significant problems in our thinking

## Unreflective Thinker

Unaware of significant problems in our thinking

# POP QUIZ!



*What stage of thinking  
are you at?*

*Where do you think  
most people are?*



## Master Thinker

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# How to Practice Critical Thinking #1

**S.E.E.I.**      **State**  
                    **Elaborate**  
                    **Exemplify**  
                    **Illustrate**

Deliberate steps to take to  
*think at the highest level of quality*



# SEEI

- ◎ **STATE** in your own words what someone else has said or written or the key concepts, problem or question at issue
- ◎ **ELABORATE** on your statement.  
“In other words...”
- ◎ **EXEMPLIFY**: give an example of the concept from your life and from the content
- ◎ **ILLUSTRATE**: create an analogy, metaphor, simile, graph, chart, cartoon, etc.



# SEEI – Example

- ◎ **STATE** Research has shown that self-awareness is a critical skill for successful leaders. Best practice asks us how we can become more self-aware of our perspectives, traits, habits, and actions.

*Savage Chickens*

by Doug Savage



- ◎ **ELABORATE** In other words, it is crucial that a leader understands how s/he is the same as, and different from others with whom s/he works, communicates, and leads.

# SEEI – Example



- EXEMPLIFY Since self awareness is a key factor of success, I signed up for a leadership development program and completed a

360-degree assessment, along with several other tools. Along with the coaching, that taught me how others see me as well as how to be effective in communicating with them and motivating them as we transform our enterprise.





# Zoom Rooms: 10 minutes



In Random Groups

Exercise A:

- Create a SEEI example from your group
- Go to the Google doc that matches your Zoom Room number
- You have 10 minutes

Collaborative Google Doc Link:

[https://docs.google.com/document/d/1E2ZJSzxqNtErqgCw3pY72C5x6L7MezP\\_-ZG8wDVoAOc/edit](https://docs.google.com/document/d/1E2ZJSzxqNtErqgCw3pY72C5x6L7MezP_-ZG8wDVoAOc/edit)

# How to Practice Critical Thinking #2

Follow proven  
strategies, such as  
The Elements of Thought



# The elements of thought...

In attempting to answer a **question**  
we think for a **purpose**  
within a **point of view**  
based on **assumptions**



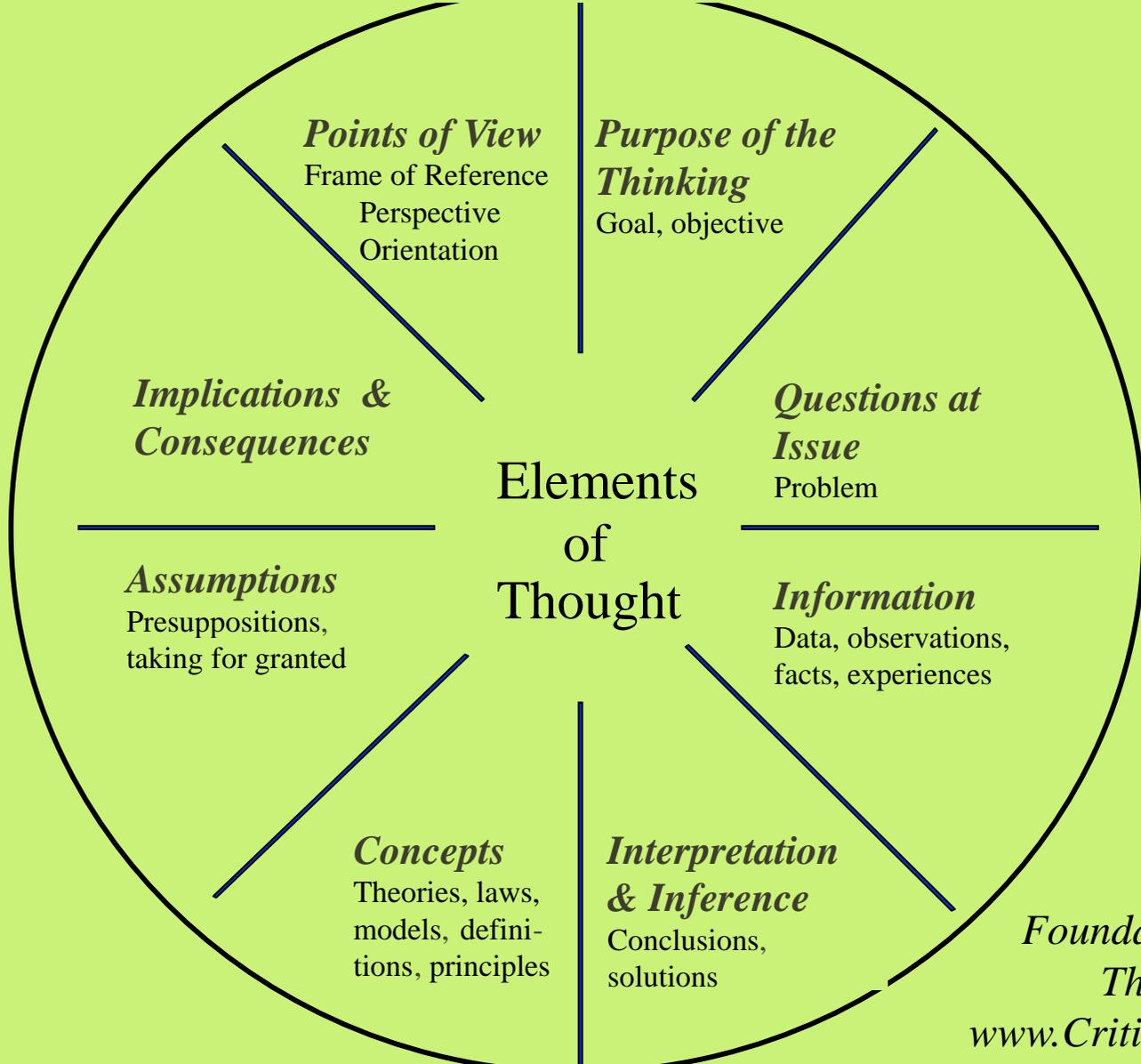
leading to **implications** and **consequences**.

We use **data, facts, and experiences**  
to make **inferences** and **judgments**  
based on **concepts** and **theories**

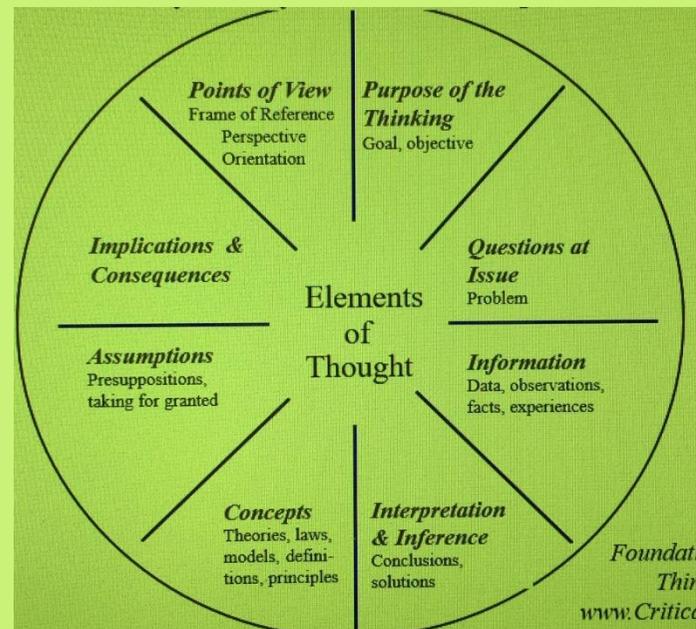
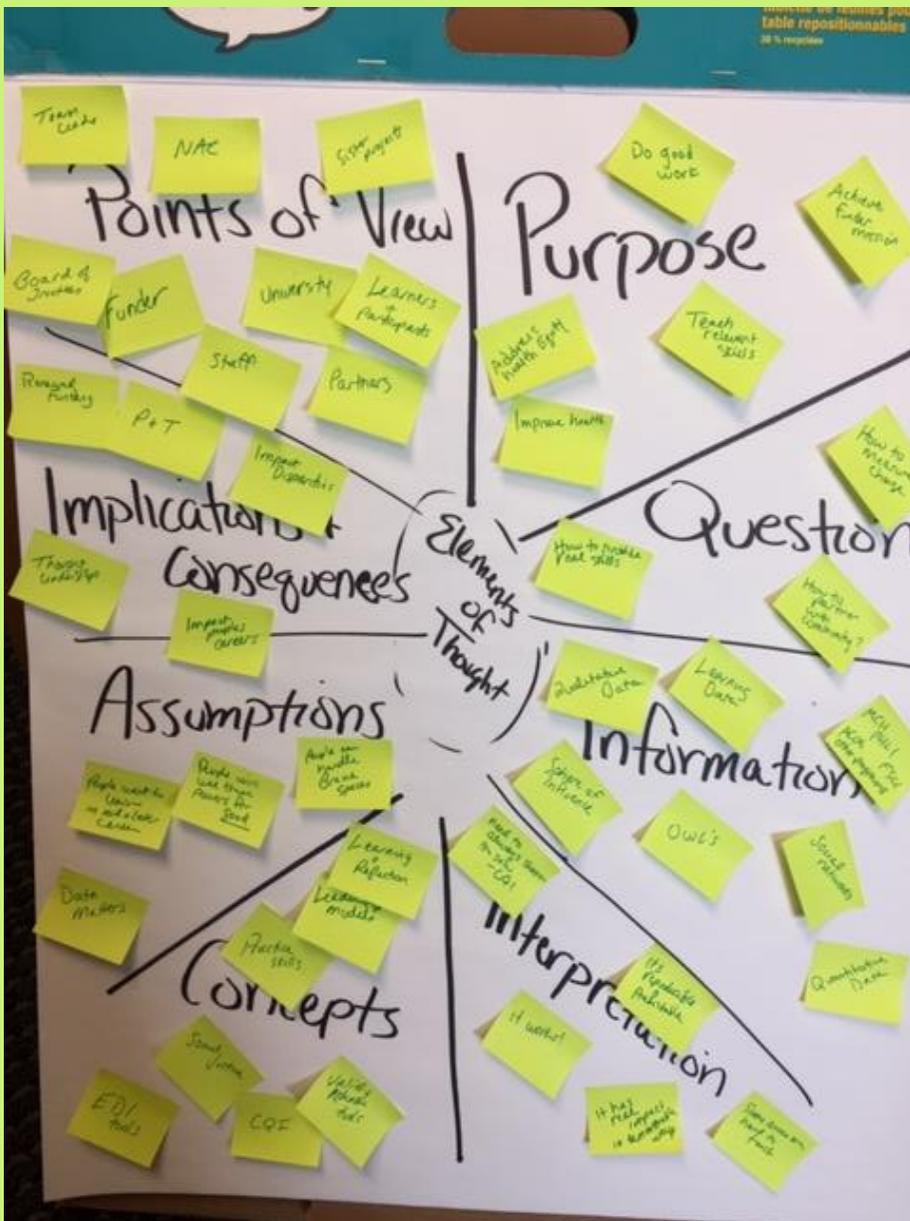
*Make sure your thought process includes these steps.  
It is like showing your work in math class.*



**These *Elements of Thought* might seem intuitive, but check your assumptions and examine whether you really do follow these steps**

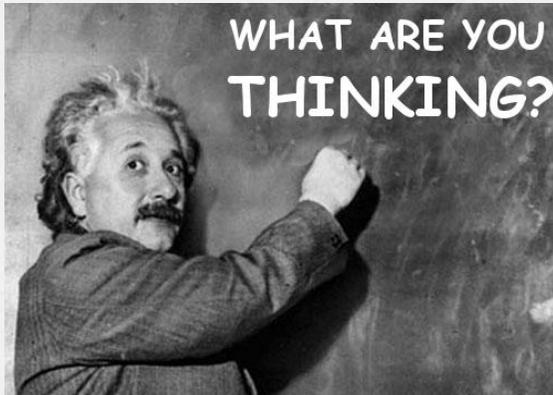


*Source: The Foundation for Critical Thinking, online at [www.CriticalThinking.Org](http://www.CriticalThinking.Org)*



**When you do an  
*Elements of Thought*  
 group exercise, your board  
 might look something like this  
 (or be even busier!)**

# How to Practice Critical Thinking #3



## The Standards of Reasoning

# The 9 Standards of Reasoning

Clarity

Breadth

Accuracy

Significance

Precision

Fairness

Depth

Relevance

Logic

---



# Standards of Reasoning Questions to Ask

**Clarity**

Accuracy

Precision

Depth

Logic

Relevance

Fairness

Significance

Breadth

Could you give me an example?

Can you elaborate further?

Could you illustrate what you mean?





# Standards of Reasoning Questions to Ask

Clarity

**Accuracy**

Precision

Depth

Logic

Relevance

Fairness

Significance

Breadth



How could we check on that?

How could we test or verify that?



# Standards of Reasoning Questions to Ask

Clarity

Accuracy

**Precision**

Depth

Logic

Relevance

Fairness

Significance

Breadth



Could you be more specific?

Could you give me more details?



# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

**Depth**

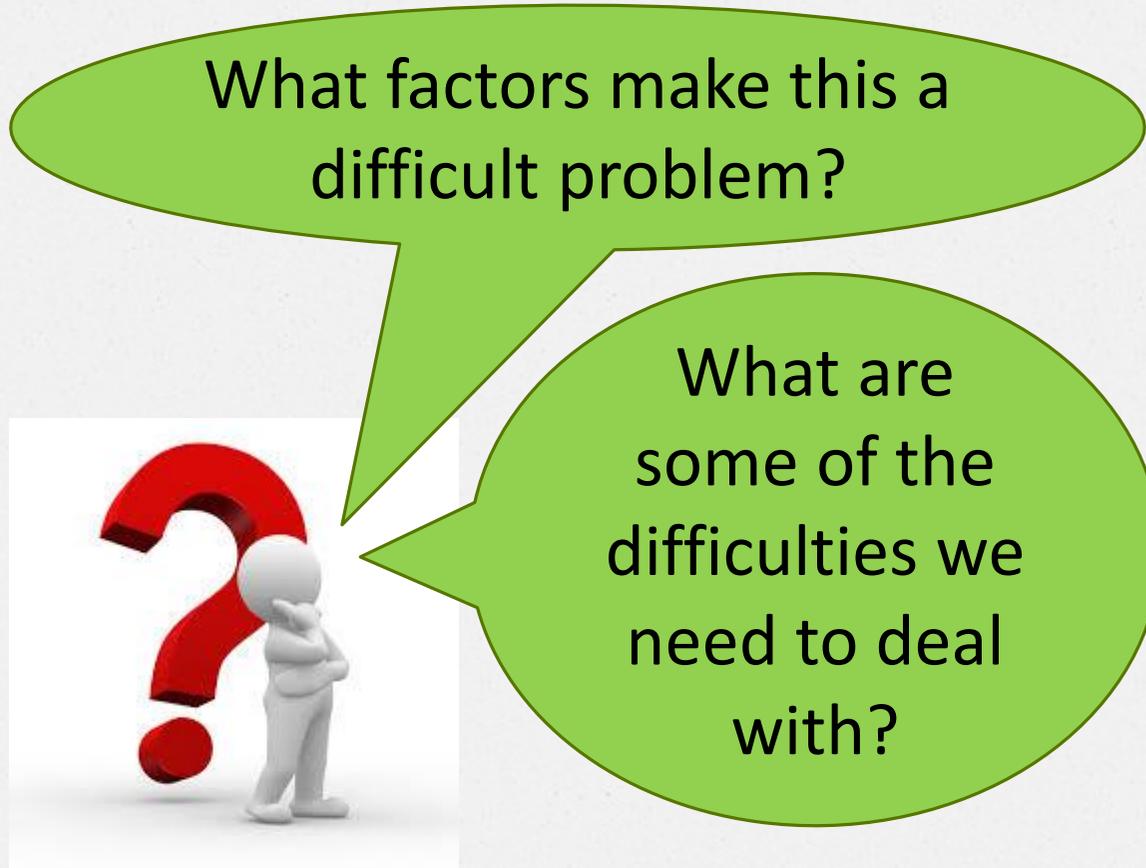
Logic

Relevance

Fairness

Significance

Breadth





# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

Depth

**Logic**

Relevance

Fairness

Significance

Breadth



Does all this make sense together?

Does your first paragraph fit in with your last?

Does what you say follow from the evidence?



# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

Depth

Logic

**Relevance**

Fairness

Significance

Breadth



How does that relate to the problem?

How does that help us with the issue?



# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

Depth

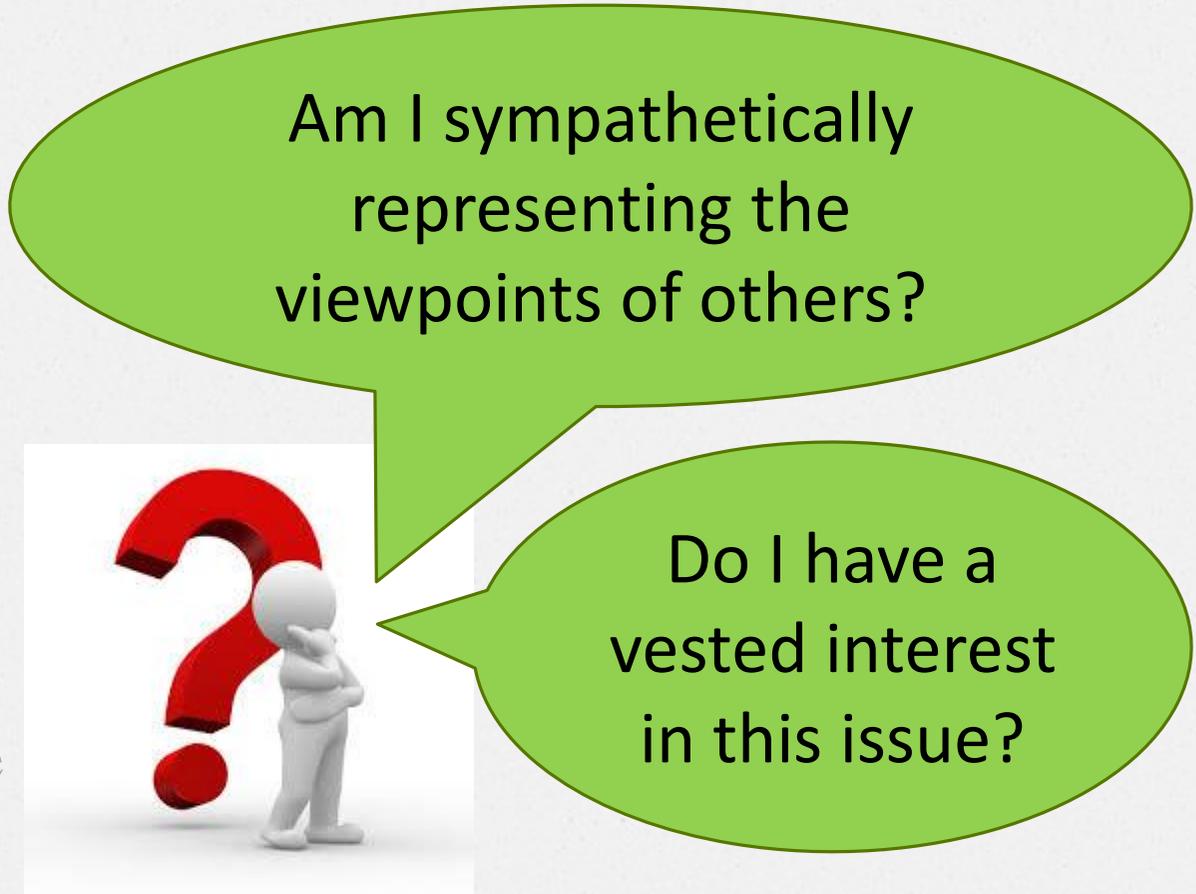
Logic

Relevance

**Fairness**

Significance

Breadth





# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

Depth

Logic

Relevance

Fairness

**Significance**

Breadth



Is this the most important problem to consider?

Which of these facts are most important?

Is this the central idea to focus on?



# Standards of Reasoning Questions to Ask

Clarity

Accuracy

Precision

Depth

Logic

Relevance

Fairness

Significance

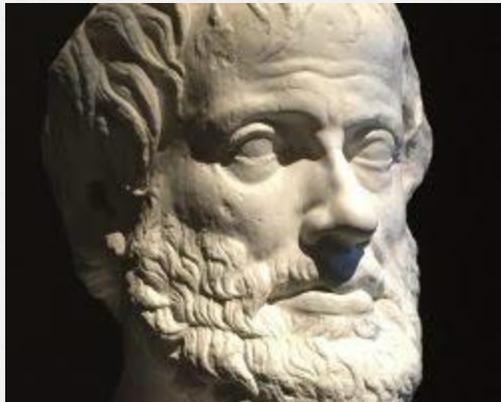
**Breadth**



Do we need to look at this from another perspective?

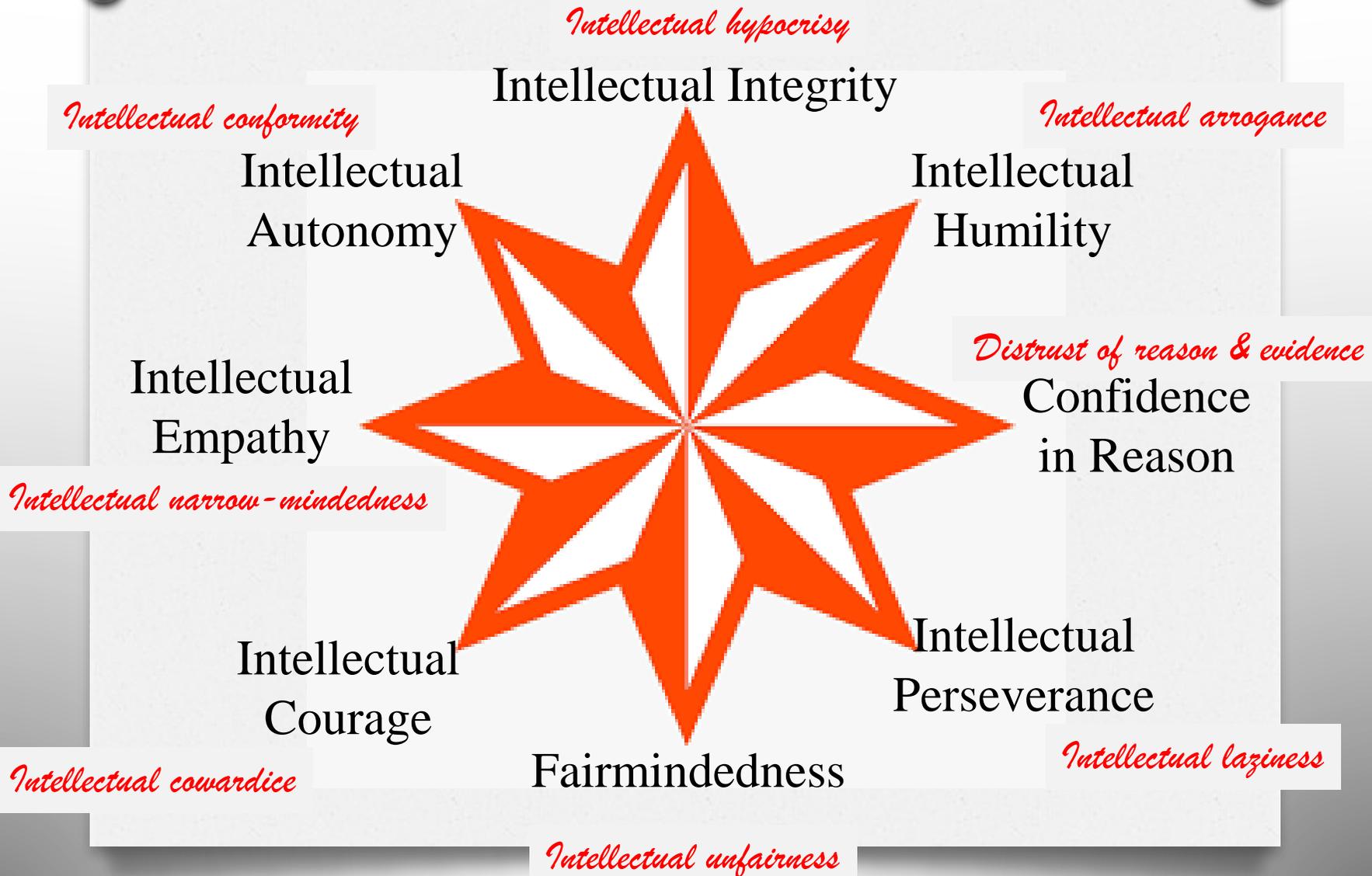
Do we need to look at this in other ways?

# How to Practice Critical Thinking #4



## The Intellectual Virtues

# The Intellectual Virtues ... *And their opposites*



# How thinking goes wrong...



o Egocentric thinking



o Irrational Thinking

# Egocentric vs. Rational thinking

Common irrational tendencies

“It’s true because *I* believe it”

This is innate egocentrism and happens when one assumes what one believes is true but really has never questioned the basis of those beliefs.

# Egocentric vs. Rational thinking

Common irrational tendencies

*“It’s true because I believe it”*

“It’s true because *WE* believe it”

This is innate sociocentrism and happens when one assumes that the dominant beliefs of the group to which one belongs are true, but really has never questioned the basis of those beliefs.

# Egocentric vs. Rational thinking

## Common irrational tendencies

*“It’s true because I believe it”*

*“It’s true because WE believe it”*

**“It’s true because I *want* to believe it”**

This is innate wish fulfillment. For example when one believes in what “feels good” or supports one’s other beliefs, believes in those things that do not require admitting to having been wrong, or believes one is better than others without seriously considering the evidence

# Egocentric vs. Rational thinking

## Common irrational tendencies

*“It’s true because WE believe it”*

*“It’s true because I believe it”*

*“It’s true because I want to believe it”*

**“It’s true because I *have always* believed it”**

This is innate self validation and is based in a strong desire to maintain long held beliefs without considering the extent to which they are justified.

# Egocentric vs. Rational thinking

## Common irrational tendencies

*“It’s true because I believe it”*

*“It’s true because WE believe it”*

*“It’s true because I want to believe it”*

*“It’s true because I have always believed it”*

**“It’s true because it is *in my selfish interest* to believe it”**

This is innate selfishness. This is when one holds fast to beliefs that justify one getting more power, money or personal advantage even though these beliefs are not grounded in sound reasoning or evidence.



# Egocentric thought can be very frustrating!

**Defensiveness**

**Arrogance**

**Apathy**

**Alienation**

**Irritability**

**Anger**

**Depression**

**Indifference**

**Resentment**

*IT'S TRUE BECAUSE...*

*"... I believe it"*

*"...WE believe it"*

*"...I want to believe it"*

*"...I have always believed it"*

*"...it is in my selfish interest to believe it"*



# POP QUIZ

## How can you apply some of these ideas?

- Go to the Google doc group space that matches your Zoom Room number
- Dissect this (actually real) statement in your Google doc
- You have 10 minutes
- Bonus: ID some Standards of Reasoning Questions you might ask this person

## Applying the Standards of Reasoning to an example of clouded thinking



Clarity

Breadth

Accuracy

Precision

Depth

Logic

Relevance

Fairness

Significance

My co-worker shot me a nasty look in the meeting. I know it's because she just won a huge promotion—everyone is drooling with jealousy. Yeah, most of the team congratulated her. I didn't stop by her office and say anything because I was working on a deadline and then so much time went by, well, it just seemed awkward after that. But now she's throwing off all kinds of nasty non-verbals. When she doesn't like someone she really can't hide it, and now I'm on her target list. I know she's going to be staring me down with that smug little smile at the staff meeting this afternoon.

Applying the Standards of Reasoning  
to an example of clouded thinking



Assumption

Clarity

Breadth

Accuracy

Inference

Logic

Relevance

Fairness

Significance

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Can you give me an example?

# Could you be a victim of egocentric thinking?

Think of a recent disagreement in which you now realize that you were not fair-mindedly listening to the views of someone else. Perhaps you were defensive during the conversation, or were trying to dominate the other person. You were not trying to see the situation from the perspective of the person with whom you were interacting. At the time, however you believed that you were being reasonable. Now you realize that you were being close-minded. Complete these statements:

1. The situation was as follows...
2. My behavior or thinking in the situation was as follows...
3. I now realize that I was close-minded because...

If you cannot think of an example, think of a situation that you were in recently in which someone else was being close-minded. Also ask yourself why you cannot think of any examples of close-mindedness on your part.



Do you want  
to become a  
Master  
Thinker?



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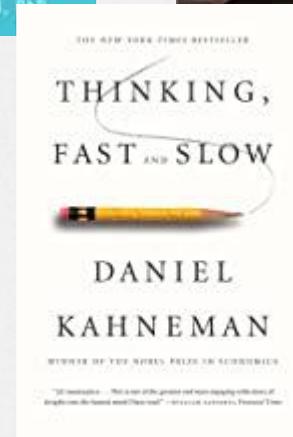
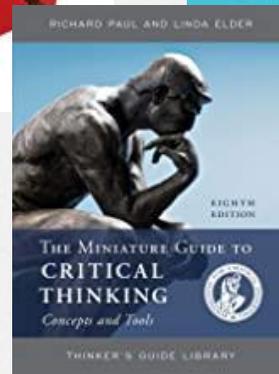
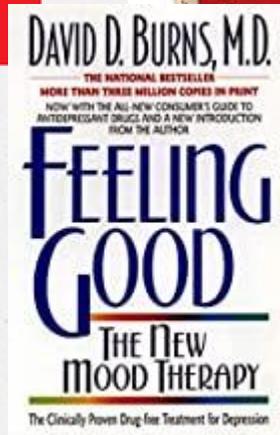
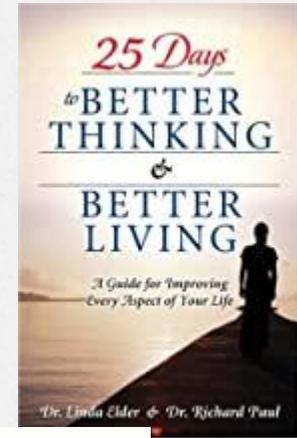
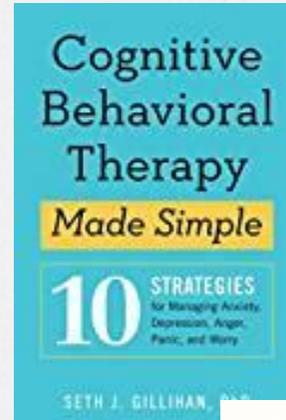
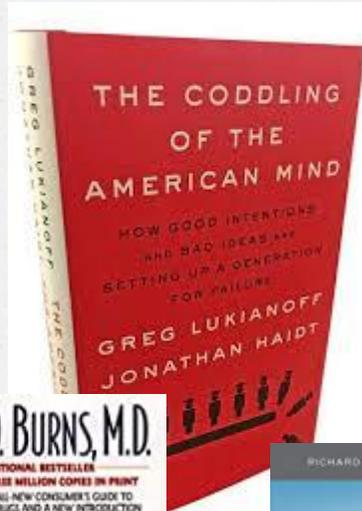
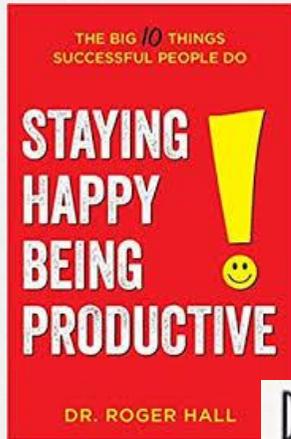
# Reflecting on your knowledge of thinking

Test yourself by writing your answers to the following:

Can you describe the role that thinking is playing in your life? (Be as clear and as detailed as you can.)

1. What was a recent assumption you made (that you should not have made)?
2. What is a recent concept you formed (that you previously lacked)?
3. List five inferences that you made in the last hour.
4. Name and explain a point of view that you sometimes use to guide your thinking.
5. Briefly describe how you analyze and assess thinking.
6. Name some intellectual standards (e.g. fairness, relevance, accuracy, etc.) you use. Explain how you apply them.
7. Explain the role of egocentric thinking in your life.
8. Take one or two intellectual traits (i.e. intellectual humility, courage, or empathy, perseverance) and explain what you are doing to try to embody them.

# Some good books to help you become a better thinker



And visit [CriticalThinking.org](http://CriticalThinking.org)

