



Non-Positional Thinking

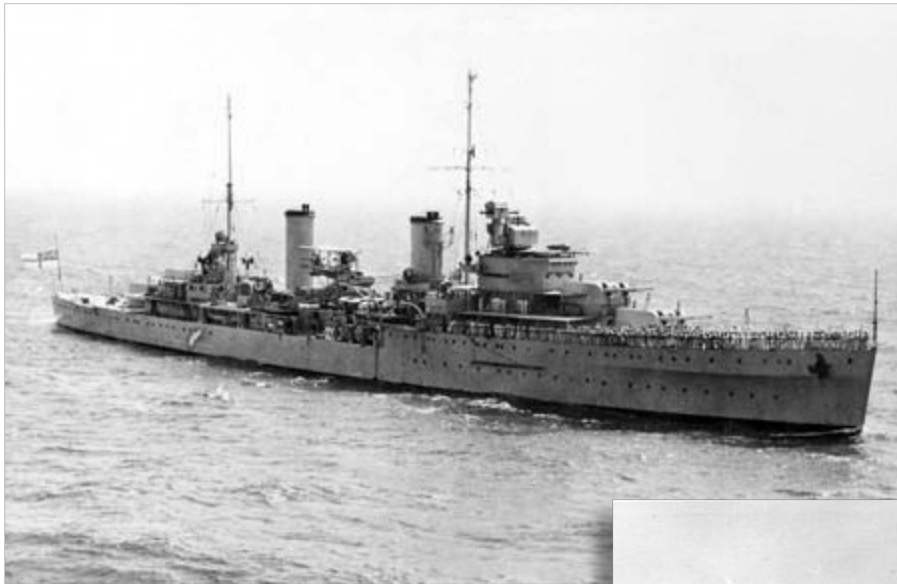
Thinking That Transforms Everything

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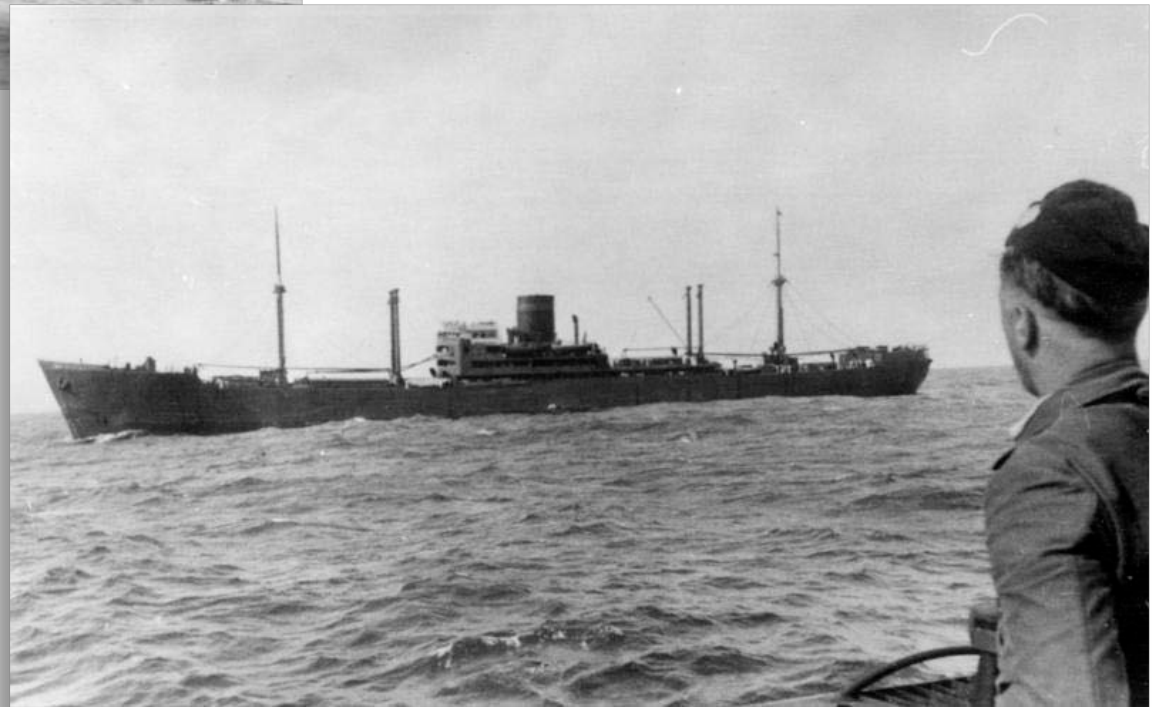
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HMAS Sydney

HSK Kormoran





Allport & Portman 1942





Non-Positional Thinking:

Thinking that transforms everything.

Today you'll discover

- *that you don't really know what you think you know*
- *and that, while you can't change that, you can greatly improve your odds*

Non-Positional Thinking:

Thinking that transforms everything.

- A great many people think they are thinking when they are merely rearranging their prejudices

– *William James*

- It is much easier to believe than to think

– *James Harvey Robinson*

Non-Positional Thinking:

Thinking that transforms everything.

- What's up?
 - The science of thinking
 - Why we think the way we do
- So what?
 - Why we have such a hard time thinking clearly
 - Common thinking errors and the cost
- Now what?
 - Learning a new (old) way of thinking
 - The only hope is to realize **there is no hope**





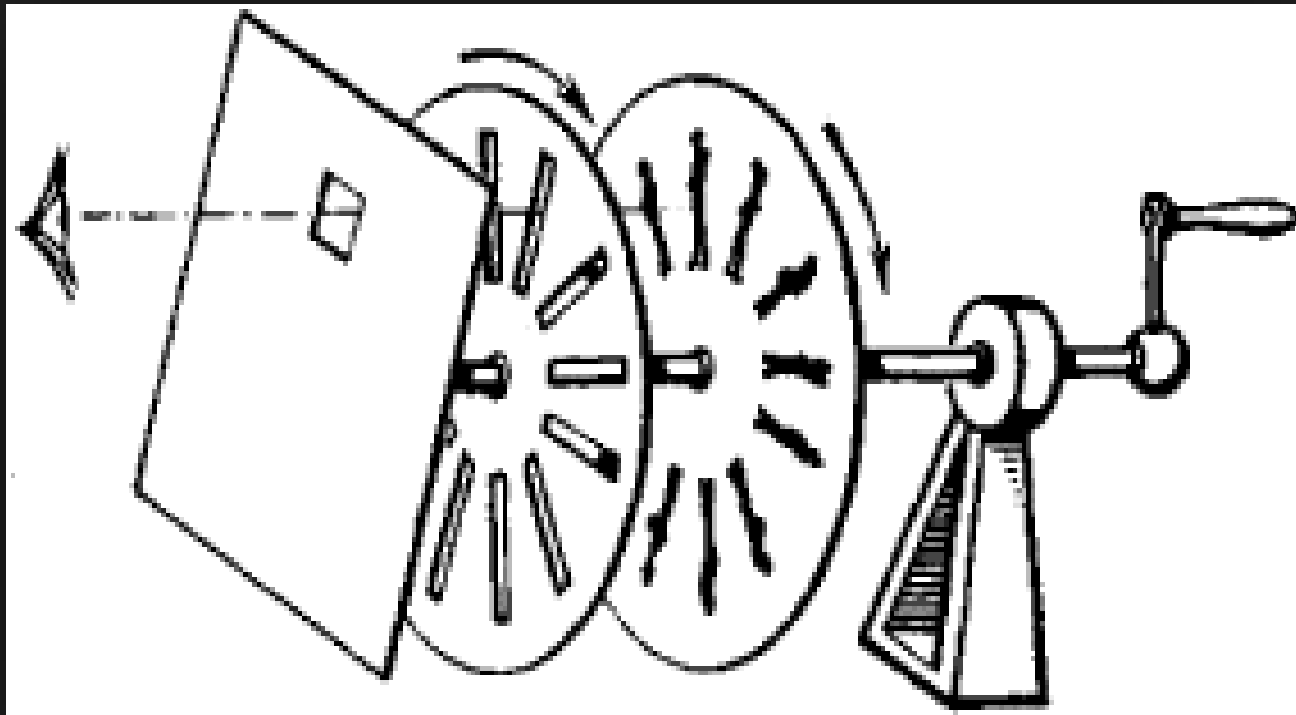
What's Up?



The Science of Thinking: The Quick Tour

- Wertheimer – the whole is more than the sum of the parts
- Bartlett – the war of the ghosts
- Loftus - eyewitness
- Damasio- the neurophysiology of the brain

Wertheimer's Stroboscope

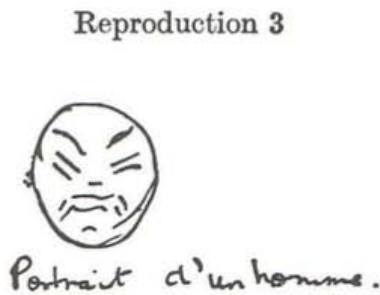
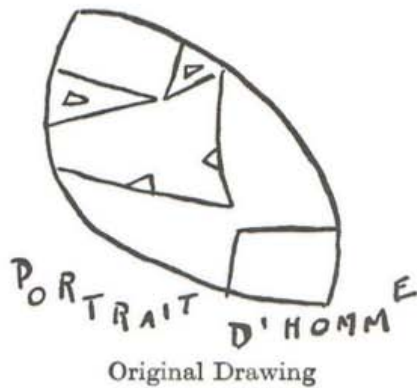




Bartlett – making memory, making meaning

- The War of the ghosts
- “Asian” mask

Bartlett – making memory, making meaning



¹ Cf. Philippe, *Rev. Phil.* XLIV, 524.



Loftus – eyewitness testimony

What we store in memory is affected by

- Post-event information:
 - Language
 - Information:
- Pre-event information: memories
- Memories that aren't

Loftus – Memory

- What we remember is **subjective**
- What we remember is fluid and **constantly changing**: we can never be certain about what we remember. Think the war of the ghosts.
- Many factors compromise eye-witness memory; confidence and sincerity do not equal accuracy
- Memories can be completely fabricated and seem absolutely real



Damasio – The Neurobiology of Thinking

Emotions: how and why?

- Sensory impression of an event is paired with an **emotional tag**
- The purpose of emotional tags are
 - Rapid responses
 - Decision-making: the myth of rational decision-making

Damasio – The Neurobiology of Thinking

Perception

- Sensory store holds vast amounts of information
- We can perceive only a very small amount
- We attend to/focus on only immediately **relevant** information
- What arouses us **emotionally** captures our attention
- Perception is shaped by past experiences and beliefs
- *We see what our mind **expects** to see*

Note: Physical conditions affect what we perceive



Damasio – The Neurobiology of Thinking

Memory

Memory is not a video; memories are NOT stored complete anywhere in the brain.

What we think of as memory is the result the simultaneous firing of neurons.

Neurons CARRY NO CONTENT, only the formula by which neurons will fire and when.

*This formula is called the **pattern code**. Think pixels.*

Damasio – perception, emotions and the making of memory

- Sensory store + selective attention = sensory pattern code
- Sensory pattern code + emotional tag = event pattern code
- Groups of related event pattern codes = organizing patterns*

Organizing patterns form the basis of how we feel and think about, and respond to everything in our lives.

**Organizing patterns have been called “schemas” and “mental models” among other names*



Organizing Patterns

- Organize all of our beliefs, memories, thoughts, perceptions into loose clusters of related things
- Connections among these things are often tenuous or “illogical”
Think dreams.
- Provide thinking short-cuts to reduce response time
- Evolutionary function is to make sense/meaning out of our experiences (real or imagined). It’s the way we learn
- “Good-enough” thinking favored survival (false positive)





Organizing Patterns

As a result...

- **All** future experiences are made to fit into existing organizing patterns
- The total of all our organizing patterns create our **constructed universe...** our **entire** reality

Things to know about the constructed universe.

- Starts before we're born; changeable in childhood
- Made up of all our **beliefs** about the world
- New information is made to fit
- Order is maintained through organizing patterns
- We are not aware of its presence: it IS the mind

We don't know who discovered water, but we know it wasn't the fish.

– Marshall McLuhan



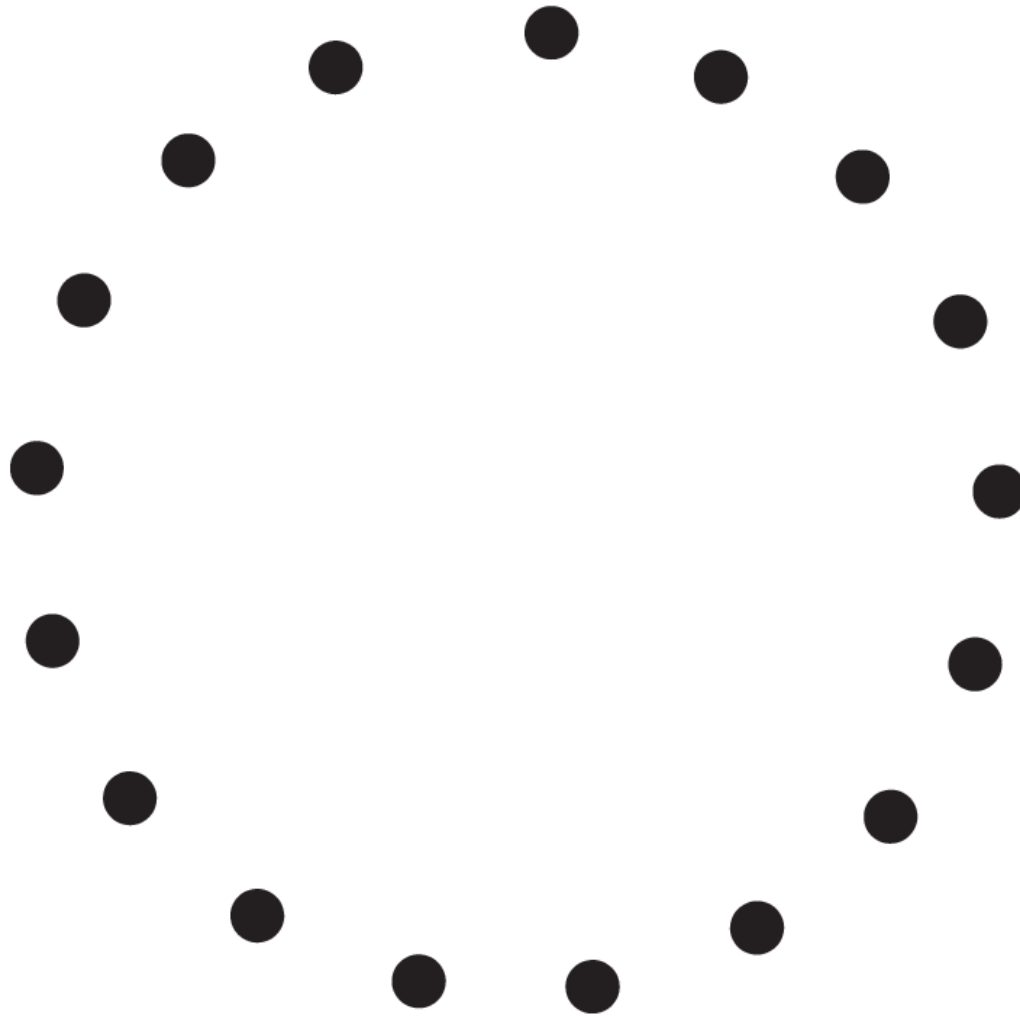
So What?

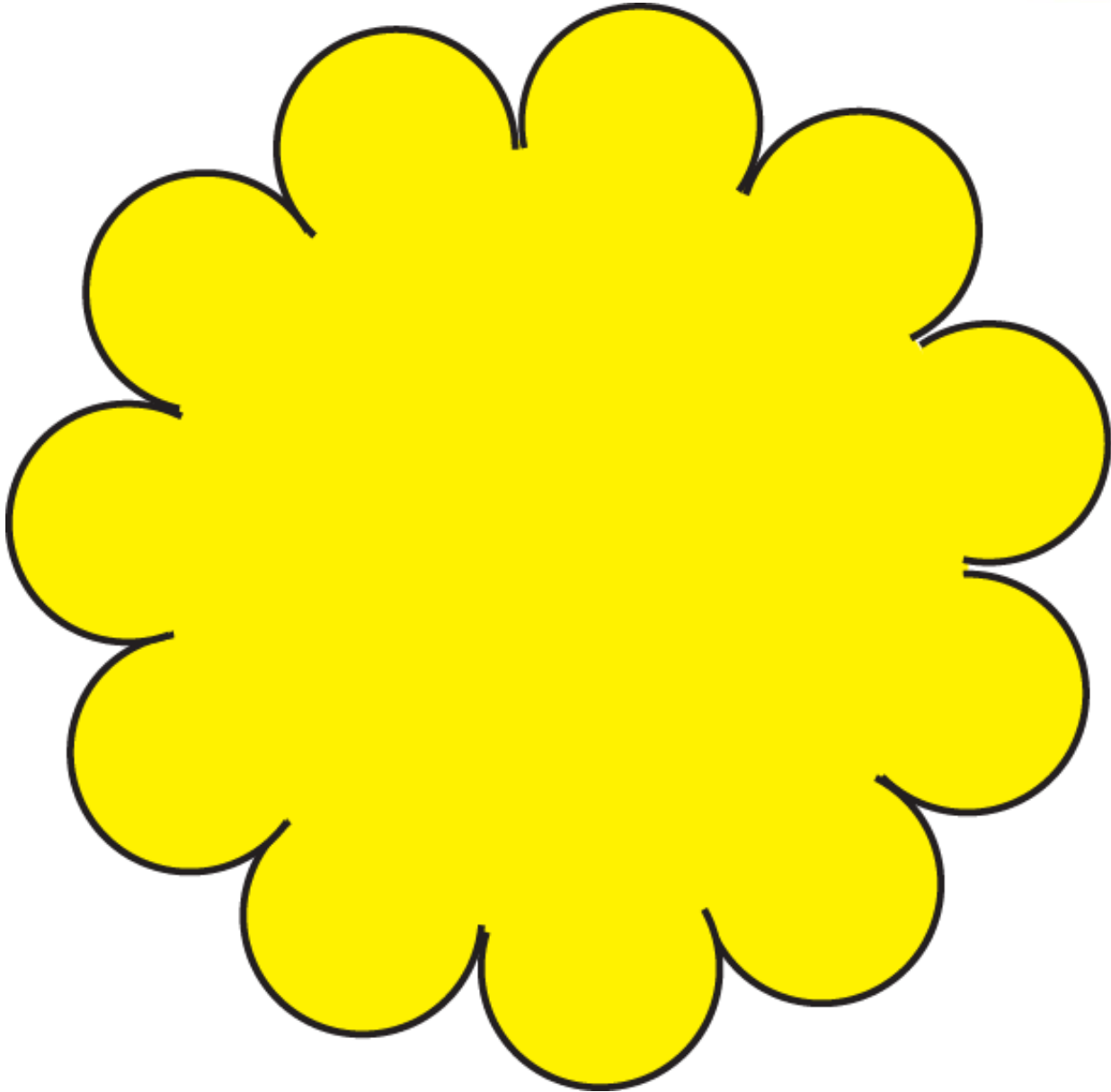
So What?

The constructed universe, its organizing patterns and thinking short-cuts are perfect for physical survival, but can be a real impediment to clear thinking.



Examples of organizing patterns,
efficiencies, errors and short-cuts ...







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Join us in the Colorado Room for a fun lesson in food tasting that includes a three-course meal and three wine pairings. Each month we will feature a new winery.



October Hill Country Wine & Supper Club Menu

Warm Artichoke & Crap Dip
with Toasted Baguettes

Filet of Sole Fish en Papillote
with Au Gratin Potatoes

Raspberry & Chocolate Cream Cheese
Stuffed Cupcakes



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Organizing patterns often lead us astray...

“Who the hell wants to hear actors talk?”

– *HM Warner, Warner Bros, 1927*

“I think there is a world market for about five computers“

– *Thomas Watson, CEO, IBM 1958*

“There is no reason anyone would want a computer in their home.”

– *Ken Olson, Chairman/ Founder of Digital Equipment Corp., 1977*

“Sensible and responsible women do not want to vote.”

– *Grover Cleveland, US President 1905*



Positional Thinking

Major thinking errors caused by organizing pattern failure:

- Maginot Line thinking
- Zero-sum thinking
- Monkey Jar thinking
- Lost Key thinking
- Short-cut errors

Thinking Errors: Maginot Line Thinking

- Doing what worked in the past *only because it worked in the past*, without examining how appropriate that strategy is in light new information.
- It includes assuming the future will be like the past.



Thinking Errors: Maginot Line Thinking

Examples

- Marshal Joffre's Maginot line
- Switzerland's Watch Industry
- Miracle on Manchester

Thinking Errors: Zero Sum Thinking

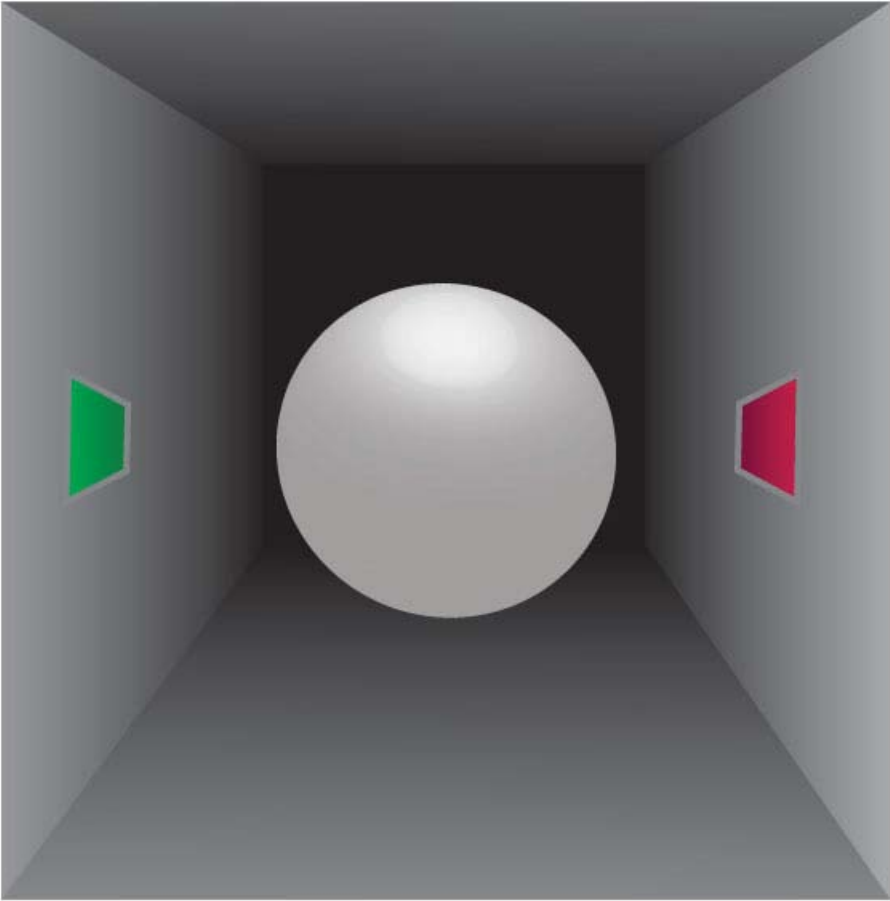
- Believing that there is a **limited amount of “solution”**

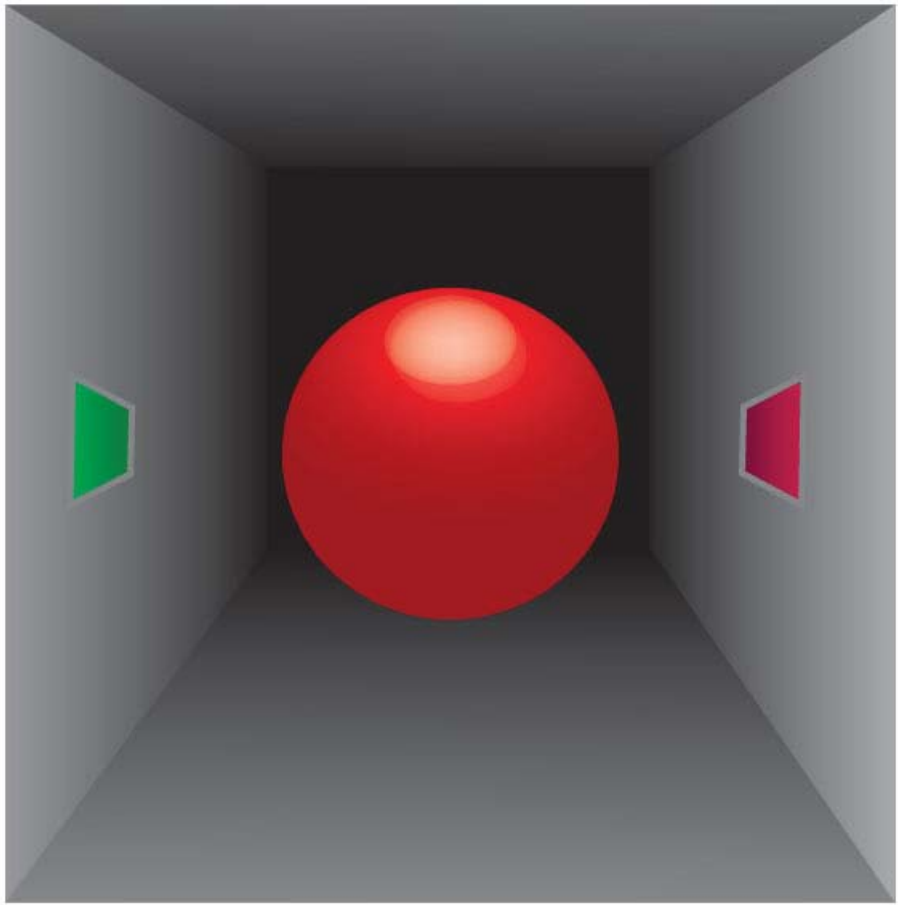


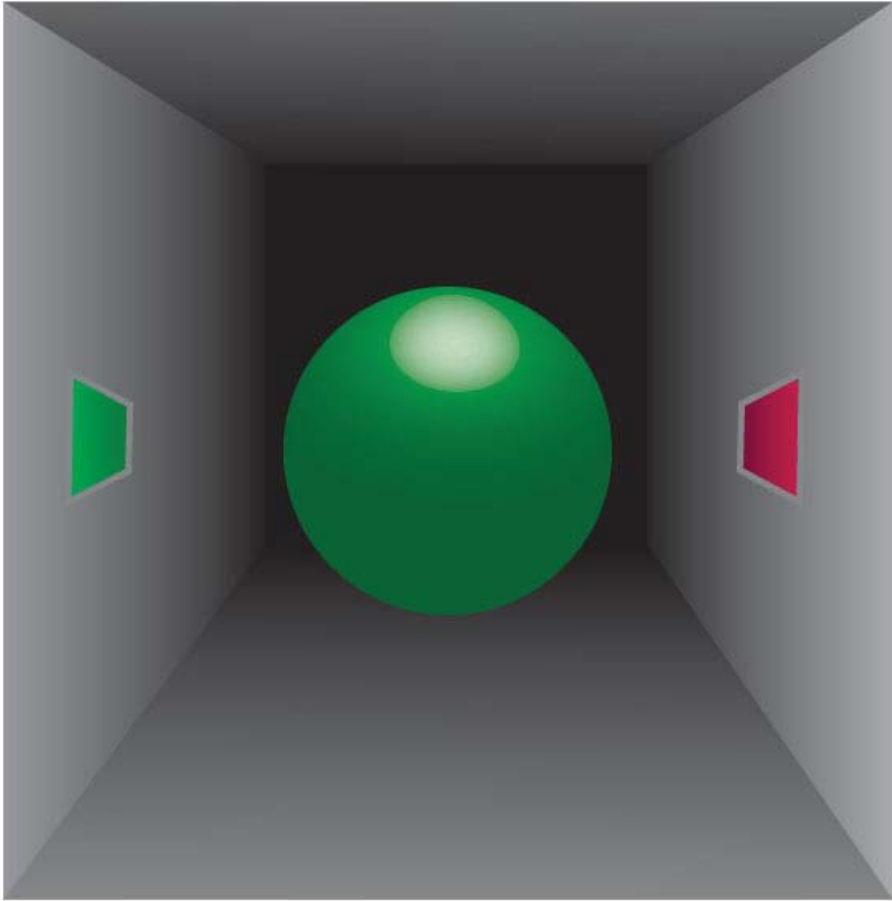
Thinking Errors: Zero Sum Thinking

Examples

- Fixed position thinking
- Either/or thinking







Thinking Errors: Monkey Jar Thinking

Thinking for the **short term**, not how current actions lead to future outcomes;

Seeing only parts, but not how they're related or how they form a whole.



Thinking Errors: Monkey Jar Thinking

Examples

- Tragedy of the commons; the environment
- Shifting the burden
- American autos



Thinking Errors: Lost Key Thinking

Looking for information/solutions/answers somewhere only because that's where the information is **easy to access.**



Thinking Errors: Lost Key Thinking

Examples

- Measuring results: call Center
- Treating the symptoms

*Not everything that can be counted counts;
not everything that counts can be counted.*

(Variously attributed to Albert Einstein and a half dozen others)



Thinking Errors: Categorization Errors

We take **cognitive shortcuts** in our reasoning to help us make sense quickly, but fail to verify the accuracy.



Thinking Errors: Categorization Errors

Examples

- Stereotyping
- Biases

These had important survival value on the savannah!

Positional Thinking Errors Reinforce Themselves

- No external evidence needed!
- Conclusions are taken as proof
- This proof reinforces the position.

You Say You are Logical/Reasonable

- What is logic?
- What determines if something is logical?
- Is logic ever wrong?



Logic/Reasonableness

- Logic is nothing more than the rules YOU'VE made up for navigating within your constructed universe!



Logic/Reasonableness

- Logic is nothing more than the rules YOU'VE made up for navigating within your constructed universe!
- There are as many different systems of logic as there are beings on the earth. (The jury's out on extra-terrestrials)



Logic/Reasonableness

- Logic is nothing more than the rules YOU'VE made up for navigating within your constructed universe!
- There are as many different systems of logic as there are beings on the earth. (The jury's out on extra-terrestrials)
- Logic is subjective like taste. Nothing is ever “illogical”; things are just “differently-logical”

Why does this matter?



What Does All of This Mean?

All we know about the world is contained within our own constructed universes; **our constructed universes are not the world**, just a more or less fair representation of it.

Certainty that our constructed universe IS the world leads to positional thinking.



Now What?

Now What?

We need a new way of thinking about thinking, one that takes into account our understanding of the constructed universe.



Non-Positional Thinking: An Ideal to Strive For

- Comes out of the knowledge that we cannot trust **what we think we know.**

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- ...thus, it rises above the “position” to examine all positions **equally**

Non-Positional Thinking: An Ideal to Strive For

- Comes out of the knowledge that we cannot trust what we think we know
- ...thus, it rises above the “position” to examine all positions equally

It does this by...

- **Questioning everything** including **our own** underlying thinking, assumptions, and reasoning behind and issue...and related issues



Becoming a Non-Positional Thinker

- What do I think is so?
- What are the **facts** (observables)?
- What assumptions have I made?
- What beliefs do I have about it?
- What if my assumptions/beliefs were wrong?



Becoming a Non-Positional Thinker

- What could be alternative explanations?
- What **disconfirming evidence** can I find for my position?
- What effects will my decision have on the larger system now?
- What effects will my decision have in the long run?
- Could anything persuade me that I am wrong?



Virtues of a Non-Positional Thinker



Virtues of a Non-Positional Thinker

Humility



Virtues of a Non-Positional Thinker

Humility

Curiosity



Virtues of a Non-Positional Thinker

Humility

Curiosity

Courage



Parting story...

Bats, bugs and bridge



Parting Thought...

It ain't what we don't know that gets us into trouble,
it's what we know for sure that just ain't so.

– *Will Rogers*



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Questions/Comments/Feedback

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Additional Information

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