

# Peak Performance Cognition

# Today's Gameplan

- 1 Mastering First Principles Thinking
- 2 Second Order Thinking
- 3 Cognitive Bias Defense

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# Accurate Flow Is The Aim Of The Game

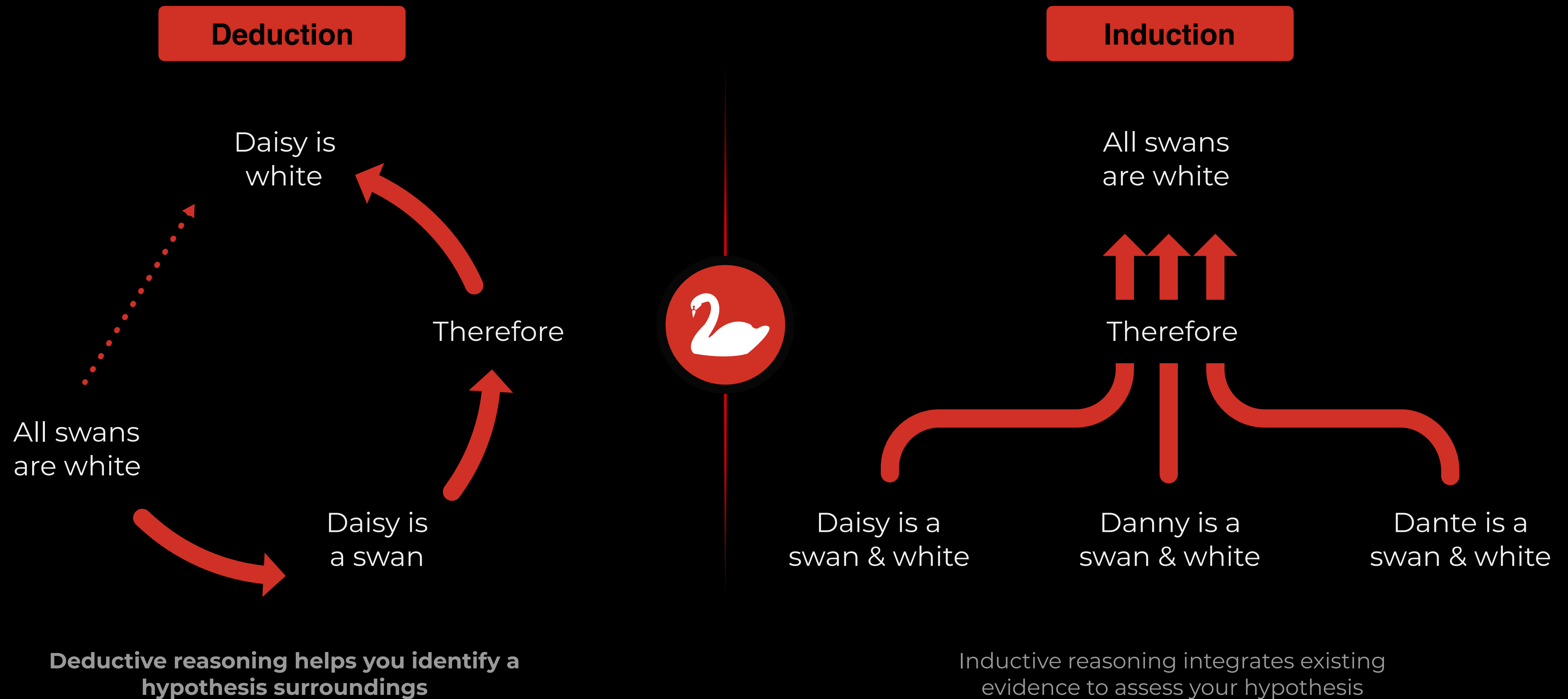
ACTIVITIES LEADING TO  
**GOALS & WELLBEING**  
**+ FLOW**



Wellbeing  
& Goals

**= ACCURATE FLOW**

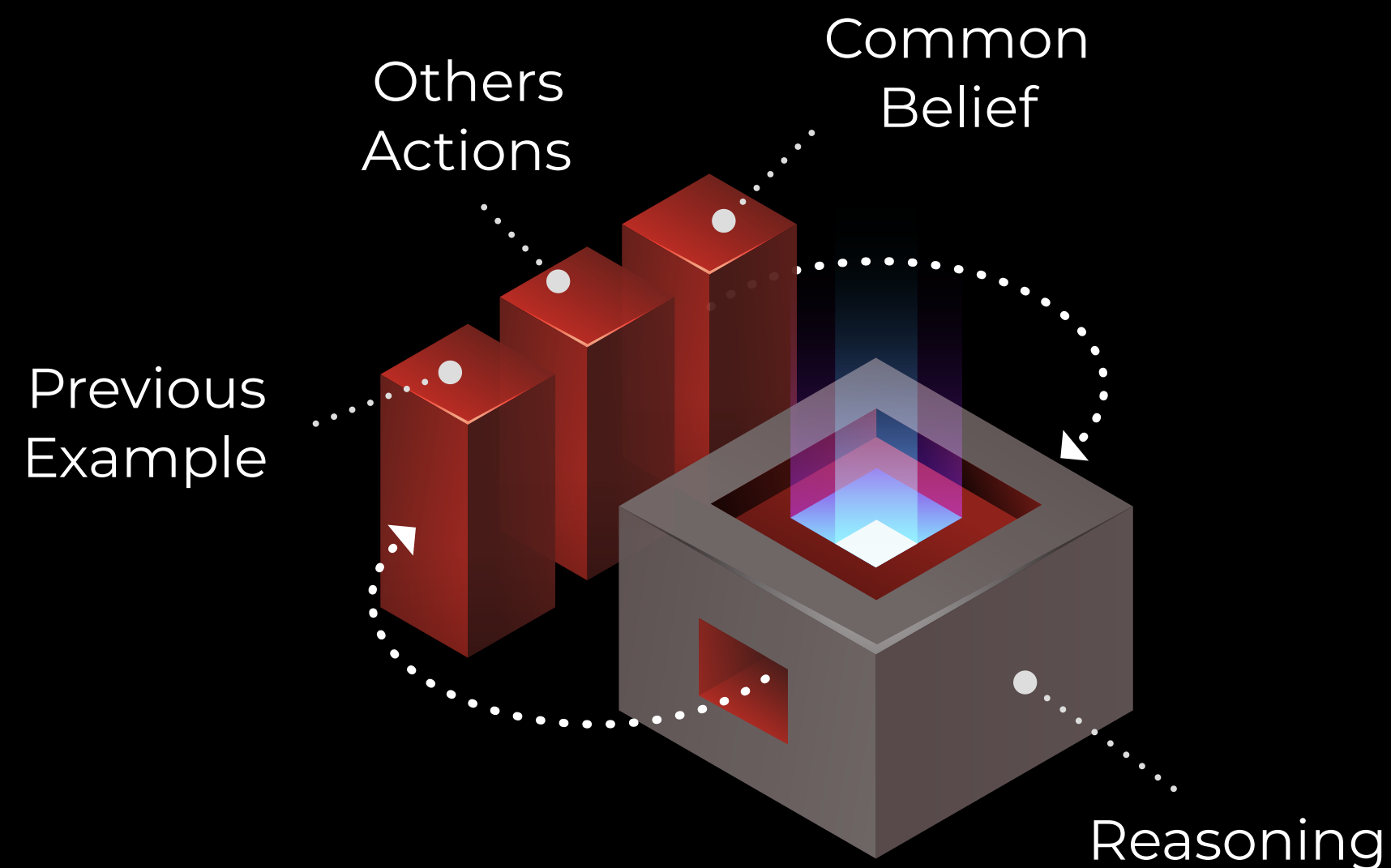
# White Swans and The Two Types Of Reasoning



# First Principles Thinking In Action

Reasoning by

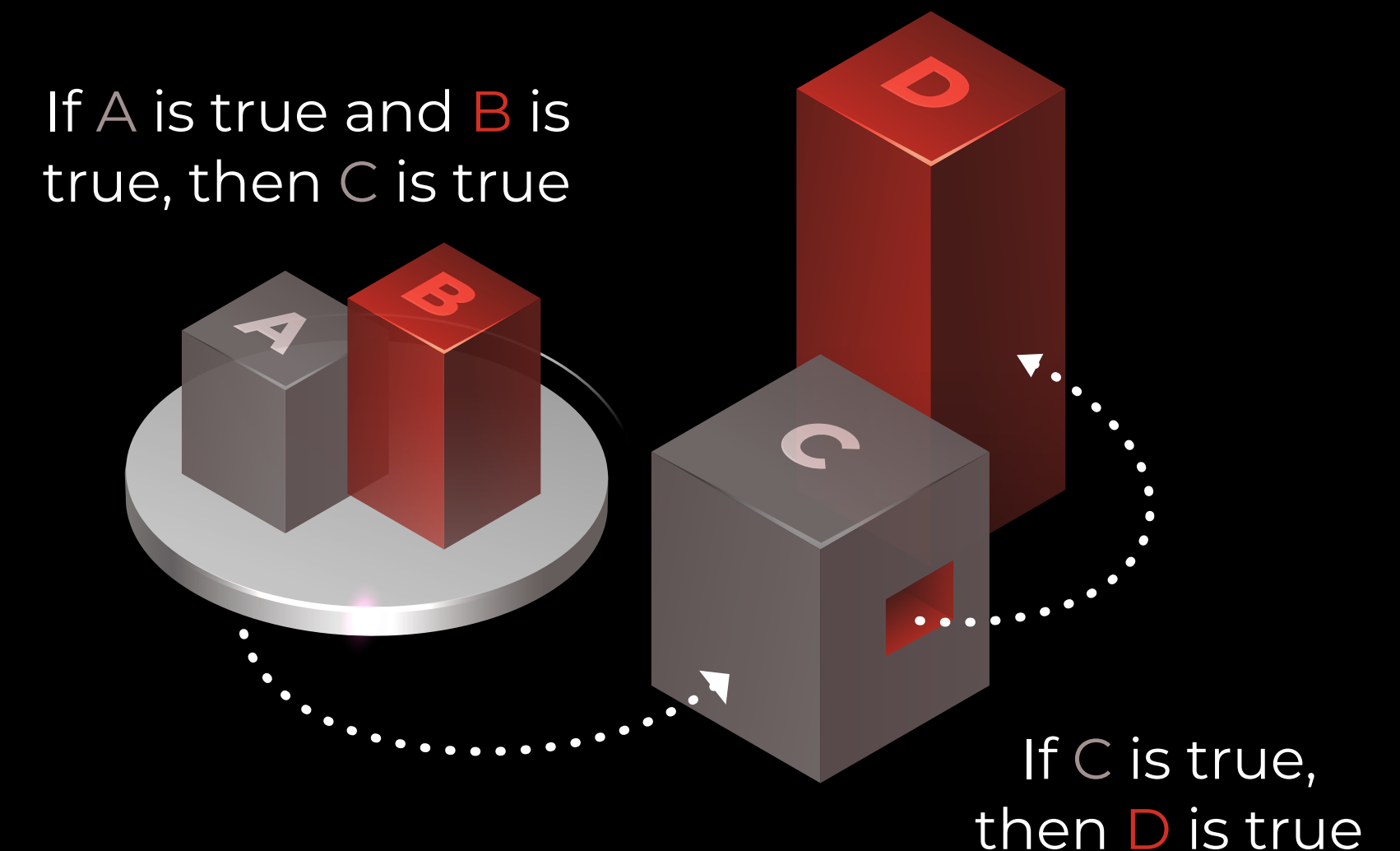
**Analogy**



Reasoning by Analogy is when you solve an argument by relating it to a common saying, belief, trend. The way it's being done now or has been done before or an example.

Reasoning by

**First Principles**



Reasoning by First Principles is when you boil down an argument to its most fundamental truths and then build up from there using deductive logic.

# First Principles Thinking Versus Reasoning By Analogy

Reasoning by

**Analogy**

Infers from existing,  
observable phenomena.

Inductive, derivative  
and consensus.

“Most healthy people I know  
eat three meals a day.”



“ I must eat three meals a day  
to be healthy. ”

Fast and energy efficient.

Reasoning by

**First Principles**

Builds upward from  
original hypothesis.

Deductive, original and  
non-consensus.

“Research shows meal timing has no  
correspondence to health outcomes.”

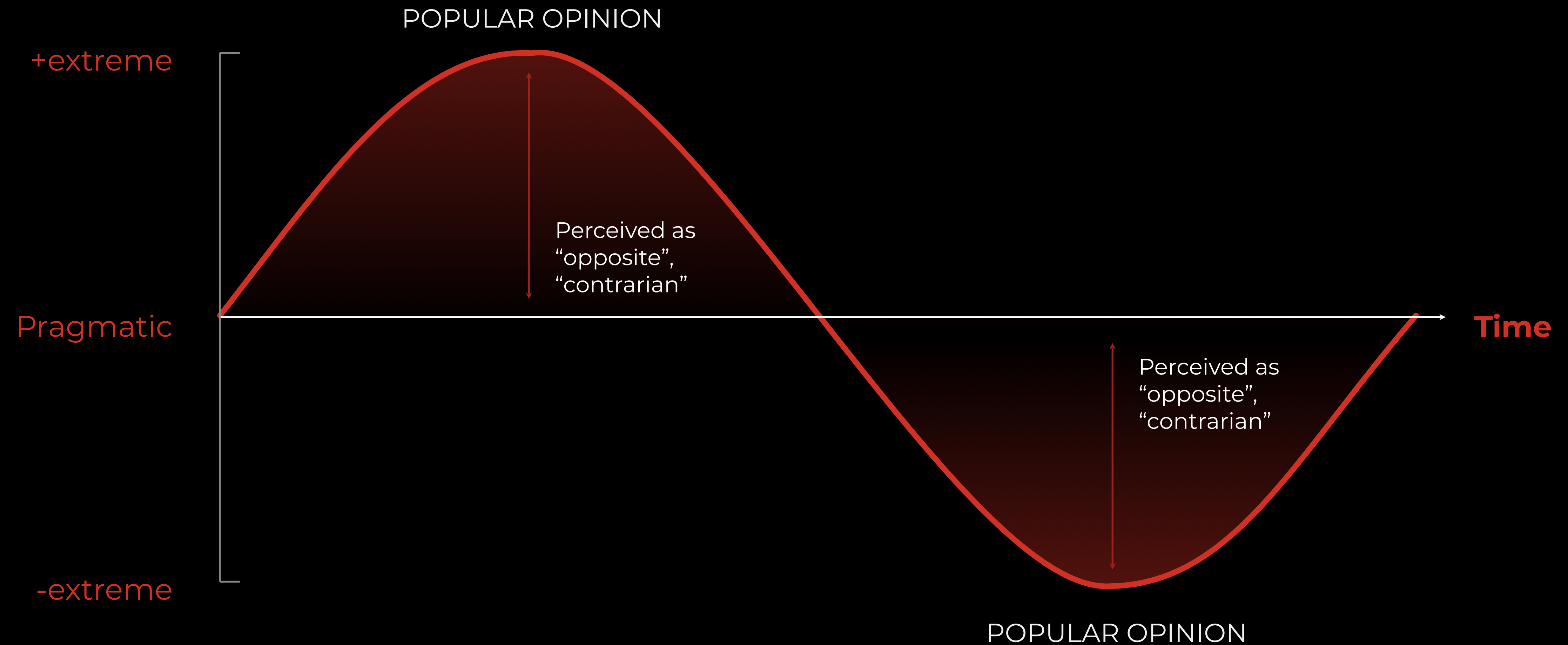


“ I can eat one meal a day  
and be healthy. ”

Yields breakthrough, novel ideas.

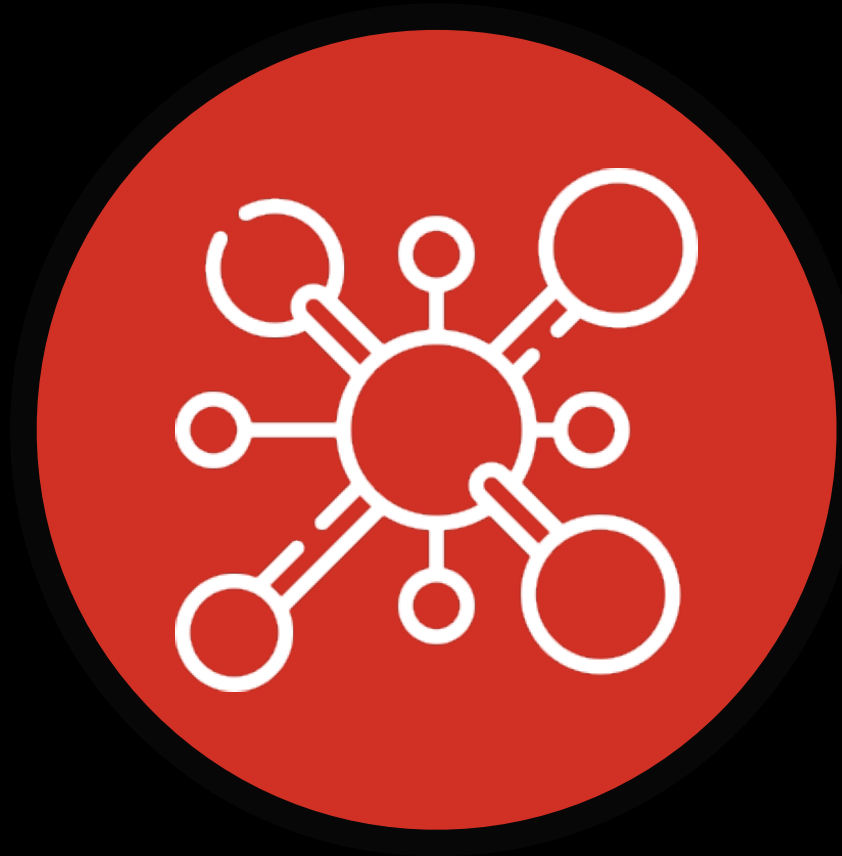


# Consensus Doesn't Indicate Truth

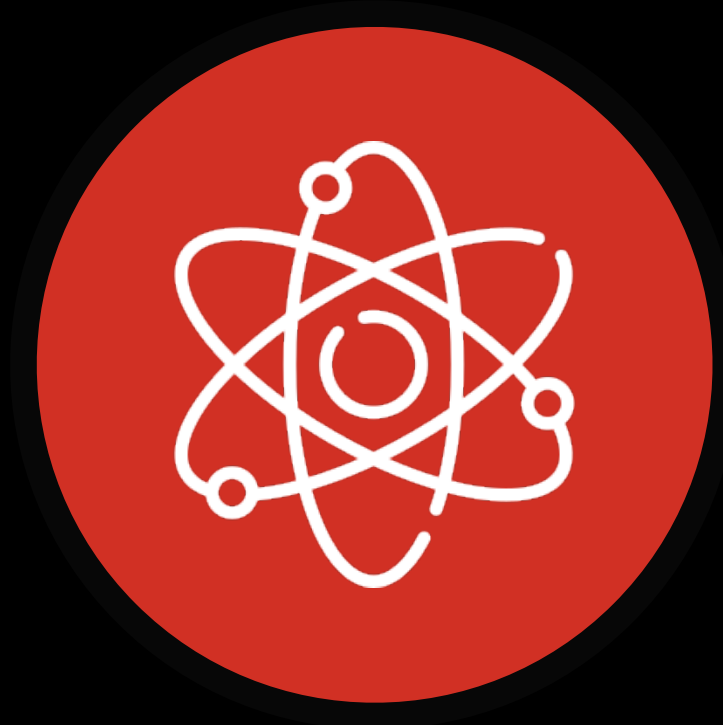




# First Principles Thinking



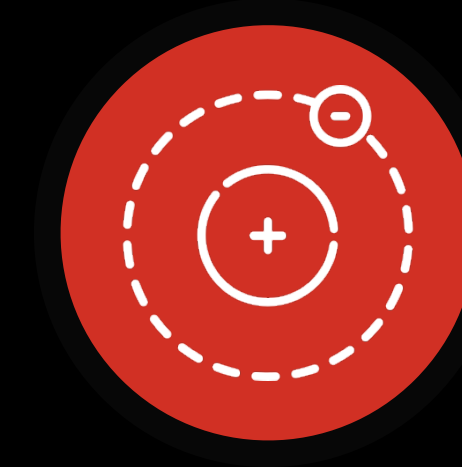
**Molecule**



**Atom**



**Nucleus**



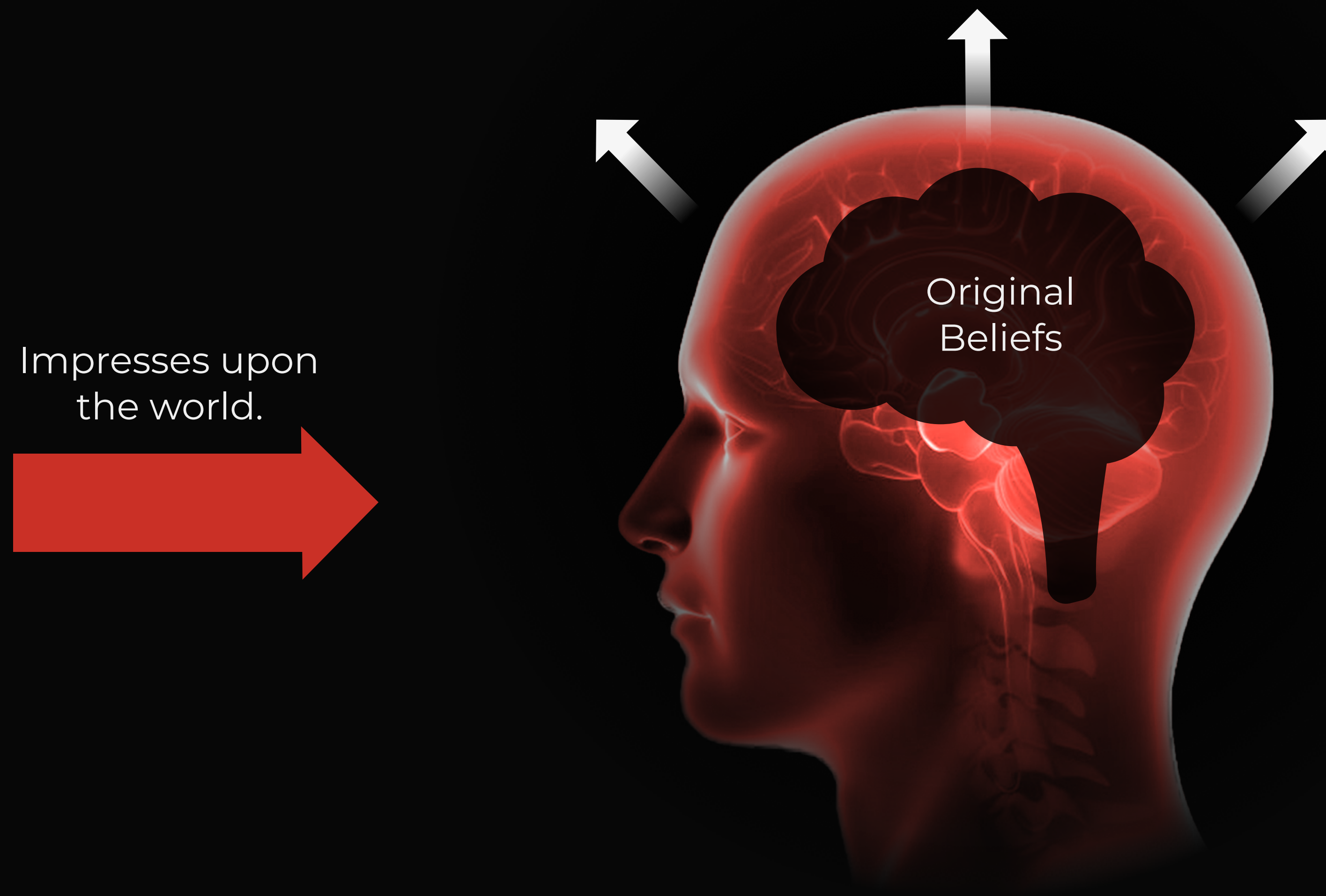
**Proton**



**Quark**

Reducing problems down to their most fundamental components.

# Becoming An Original First Principles Thinker



# Tools To Become A First Principles Thinker



## Practice Naivete

Question everything, all the time.  
E.g., Why do dogs live on land?



## Question Assumptions

Abstract away assumptions until clarity is reached. Rebuild from a clear premise.



## Generate Awe

The “watchtower effect,” from an awe experience can improve perspective and critical thinking.



## Separate Problem From Solution

When thinking, keep these separate. Solutions have consensus inbuilt. Focus on the problem and create space for an original solution.



## The Five Whys

Ask why, repeatedly until you hit a first principle or roadblock.



## Socratic Questioning

Why do I think this? What exactly do I think? How do I know this is true?

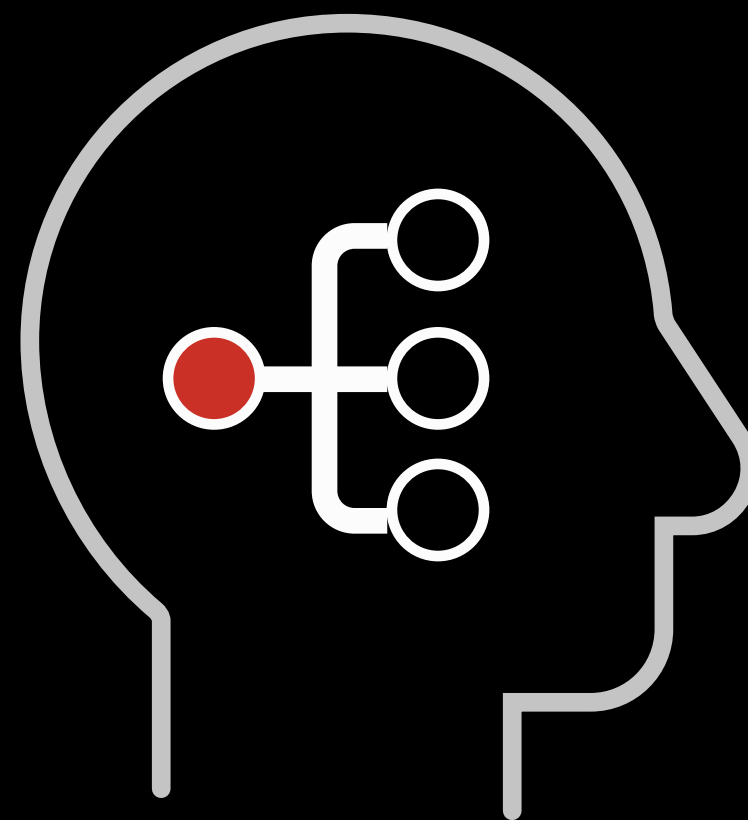
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# This Is Second Order Thinking

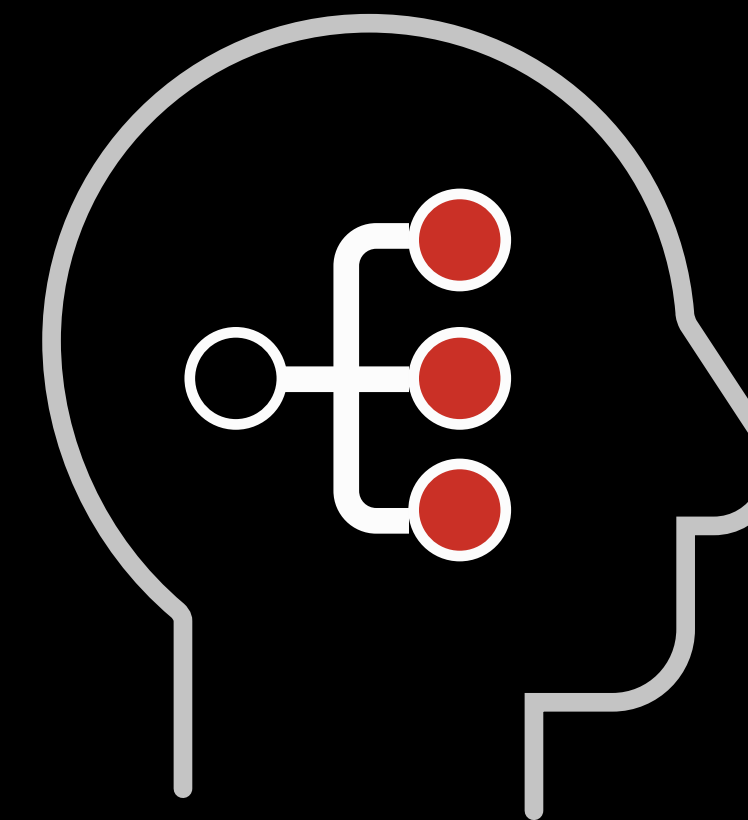
## First-Order Thinking



Analyzing consequences to first order effects of decisions.



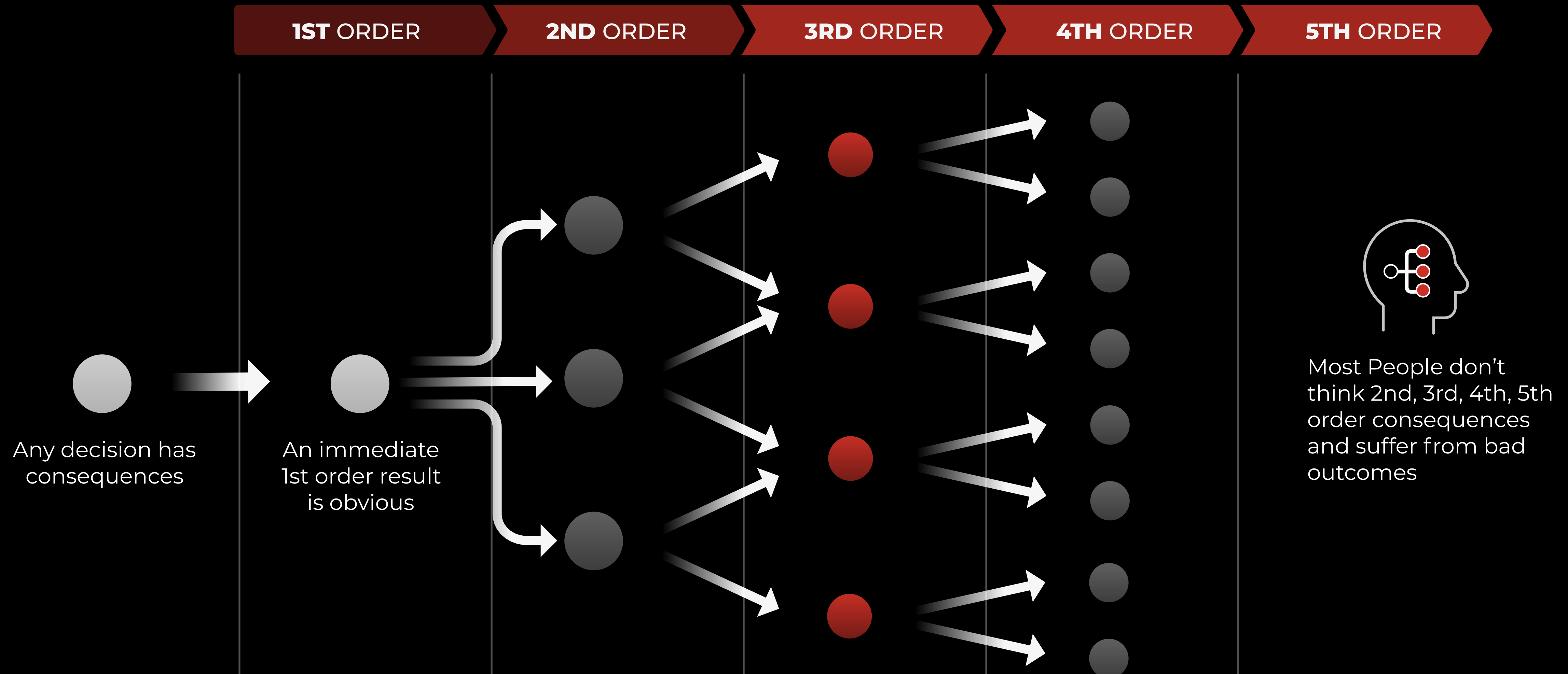
## Second-Order Thinking



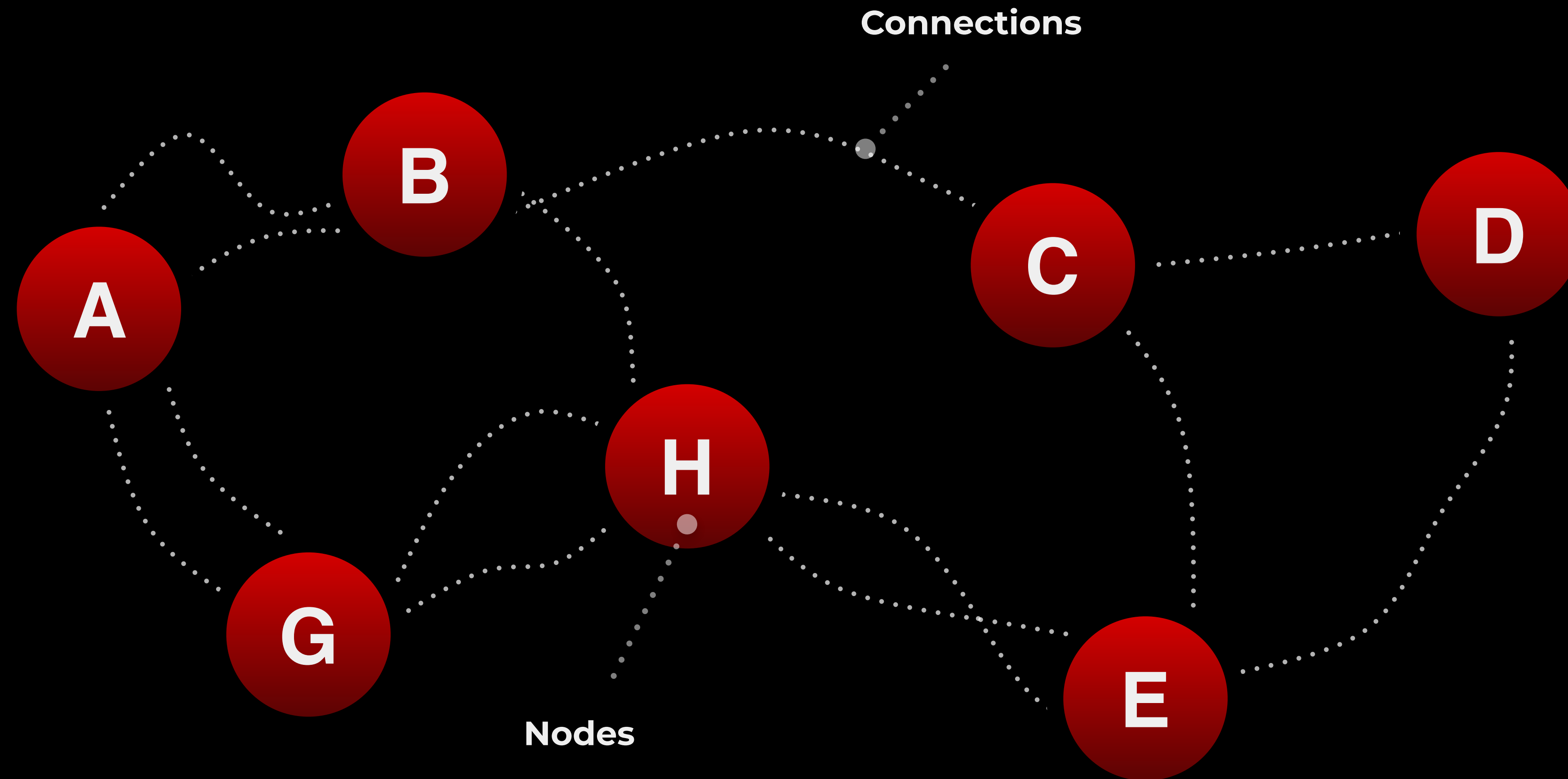
Looking beyond first order effects to understand the consequences of complex dynamics.

# Second Order Thinking Requires Rapid Forecasting

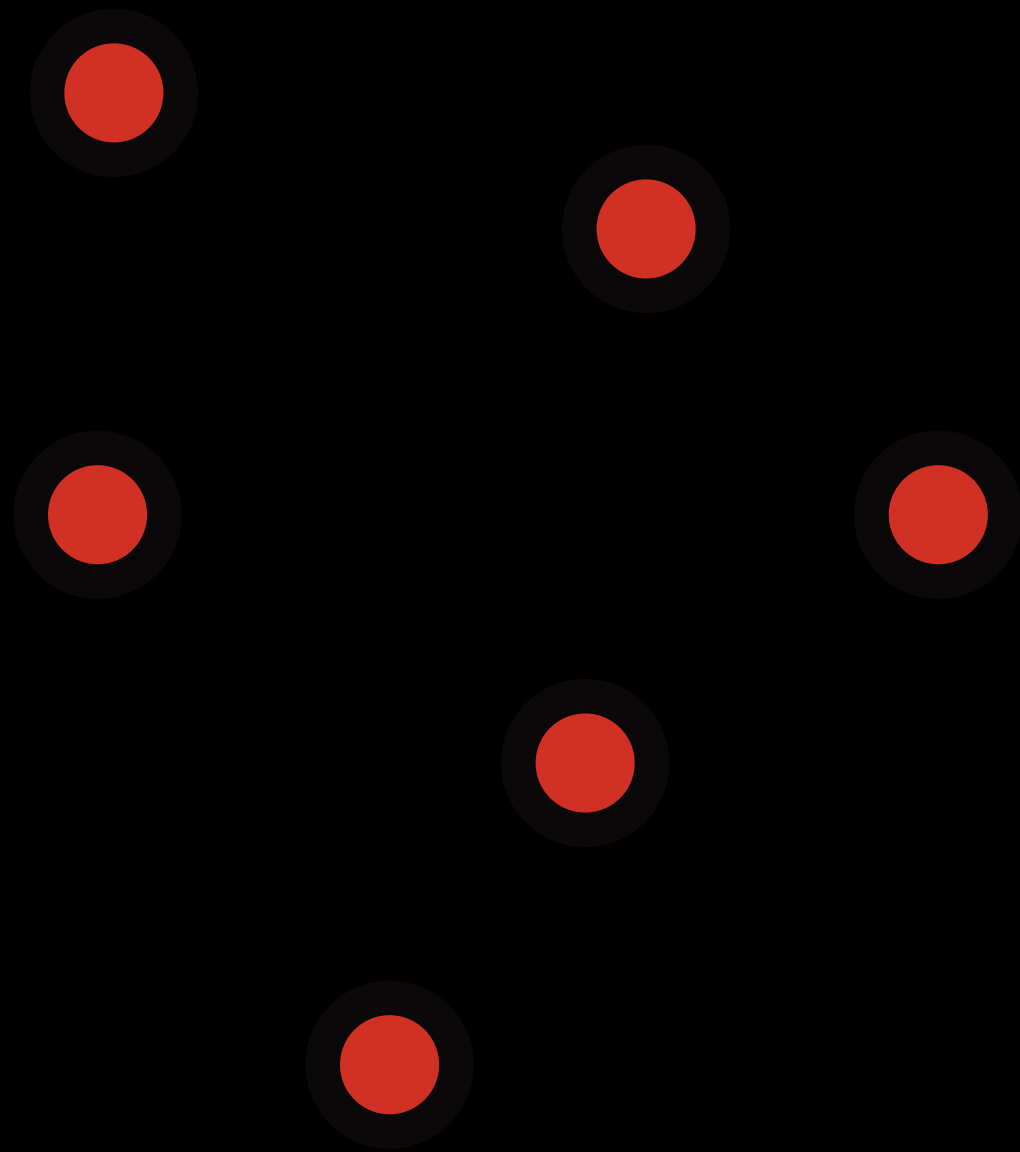
Consequences



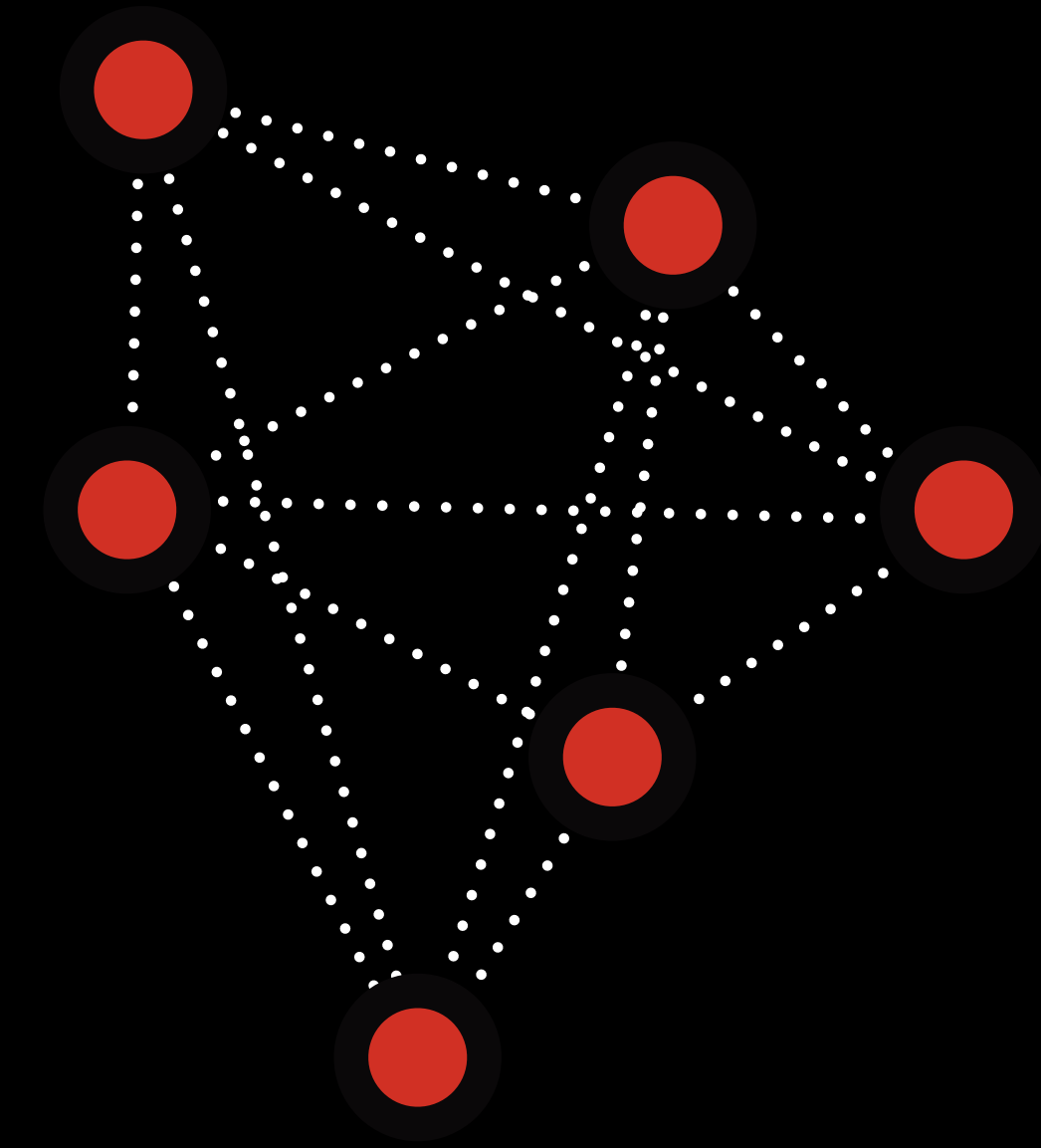
# Second Order Thinking Requires Acute Awareness Of Interrelationships



# It Will Help You See What Others Are Blind To



Disconnection



Interconnectedness



# First Order Positive = Second Order Negative

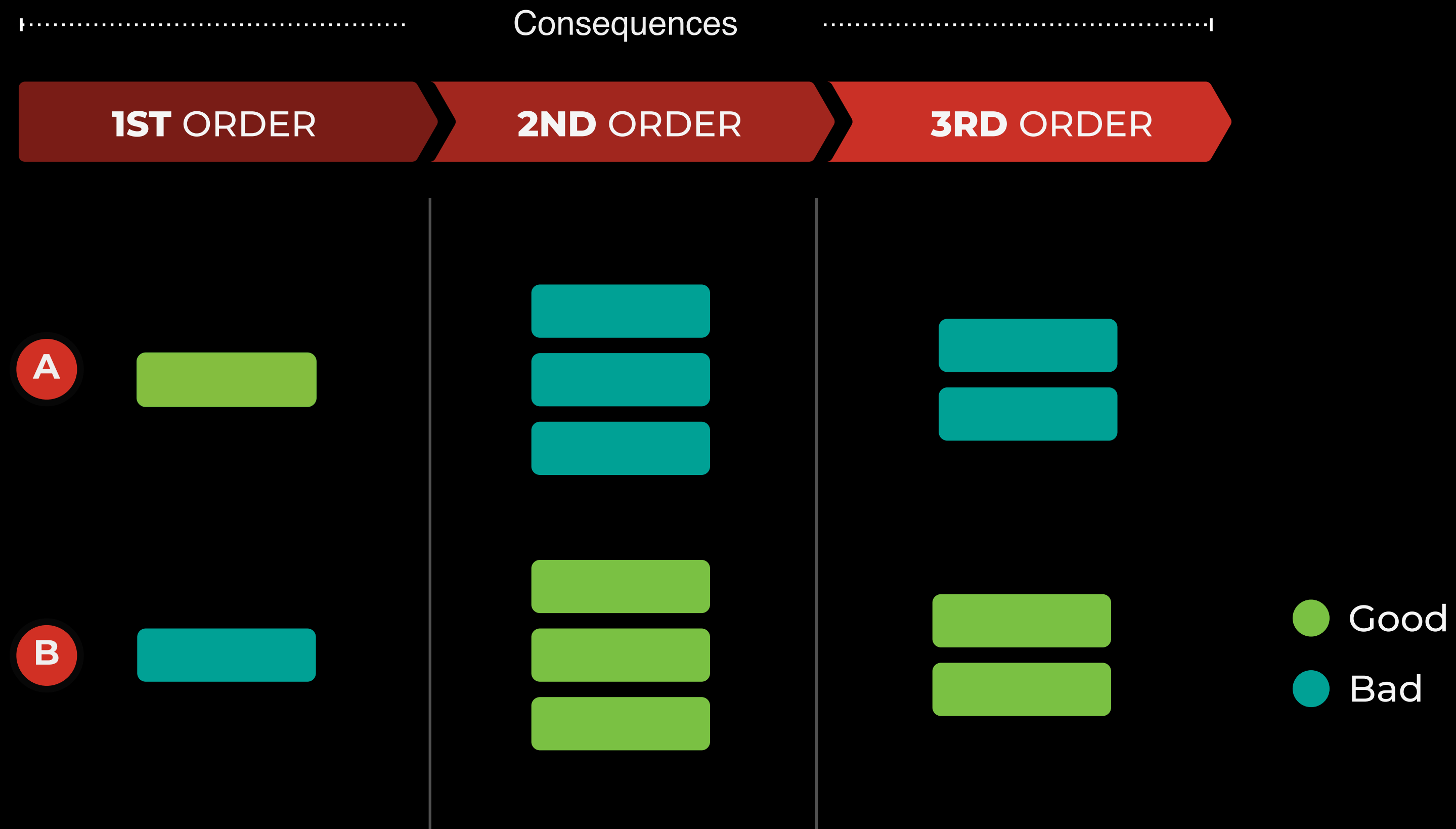


Image credit: Farnham Street

# How Do You Deploy Second Order Thinking?

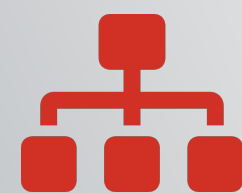
1

Build the reflexive habit of asking yourself; “And then what?” whenever making decisions, (but don’t let it paralyze you, it should accelerate your decision making by boosting certainty).

?

2

Map The 2nd, 3rd, 4th order effects through time; ask yourself: “What do the consequences look like in 10 minutes? 10 months? 10 Years?”



3

Scope out causality chains by hand to make the second order consequence evident.  
Shouting At Employee > Immediate Job Gets Done > Disengagement > Quitting > Increased Competition



4

Be aware; always that your decisions and actions take place as part of an interconnected web of downstream consequences.



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# What Are Cognitive Biases?



# What Are Cognitive Biases?

As a social psychologist, Jonathan Haidt once wrote,

“ The reasoning process is more like a lawyer defending a client than a judge or scientist seeking the truth. ”

Better thinking leads to better decision.  
All of these contrast the ability to think critically.

# What Are Cognitive Biases?

## 1 | Confirmation Bias and Motivated Reasoning

# What Are Cognitive Biases?

## 2 | Dunning-Kruger Effect

# What Are Cognitive Biases?

## 3 | Sunk Cost Fallacy



# What Are Cognitive Biases?

## 4 | Loss Aversion

# What Are Cognitive Biases?

## 5 | Availability Bias

# What Are Cognitive Biases?

## 6 | The Backfire Effect

# What Are Cognitive Biases?

## 7 | Fundamental Attribution Error

# What Are Cognitive Biases?

## 8 | Halo Effect

# What Are Cognitive Biases?

## 9 | Anchoring Bias



# What Are Cognitive Biases?

## 10 | Self-Serving Bias

## Exercise:

# Critical Thinking Training



Download Workbook  
To get started

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- 2 Generate Awe — The “watchtower effect,” from an awe experience can improve perspective and critical thinking.
- 3 Question Assumptions — Abstract away assumptions until clarity is reached. Rebuild from a clear premise.
- 4 Separate Problem From Solution — When thinking, keep these separate. Solutions have consensus inbuilt. Focus on the problem and create space for an original solution.
- 5 Socratic Questioning — Why do I think this? What exactly do I think? How do I know this is true?