



# Critical Thinking

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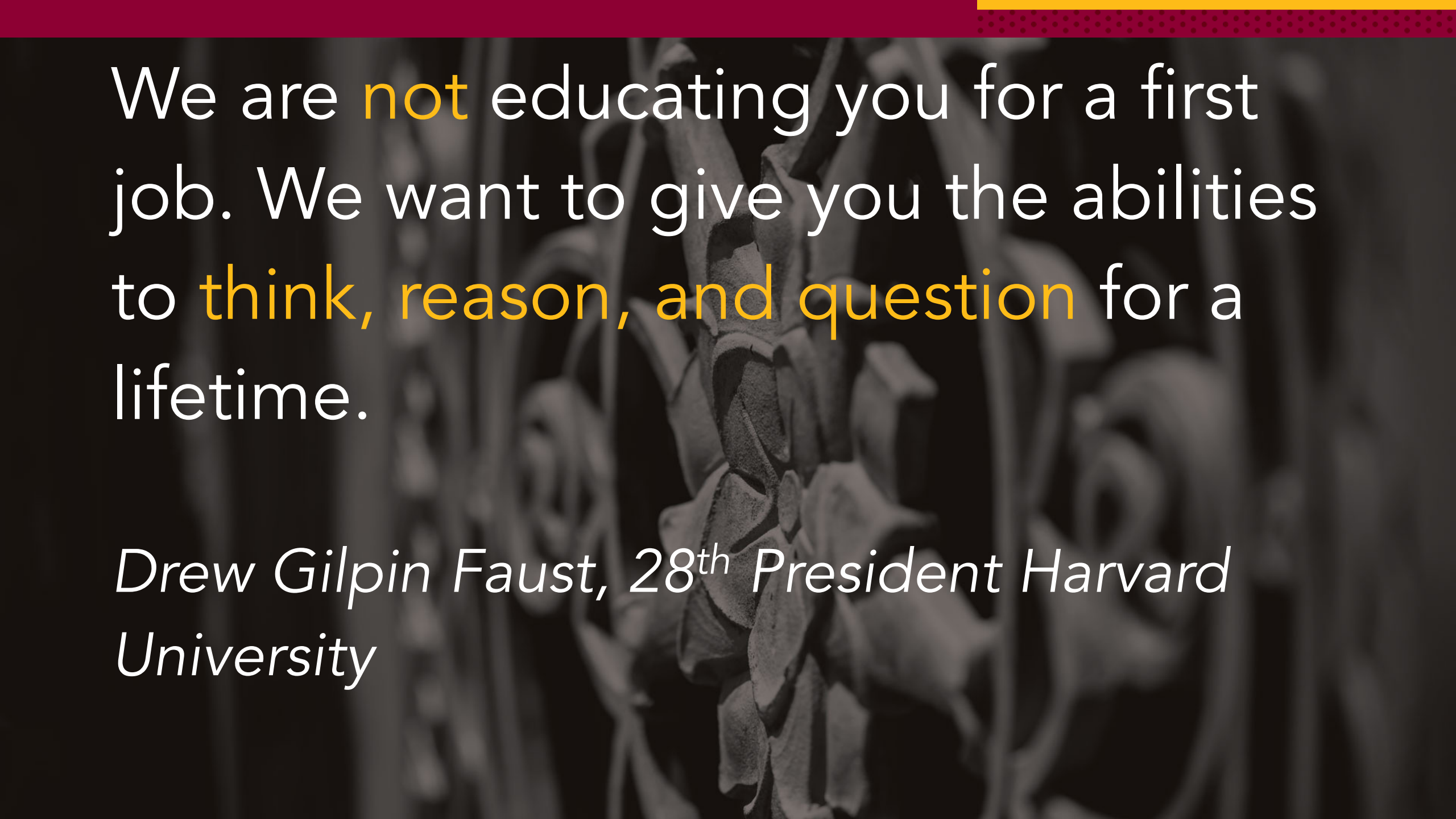


AGENDA

What?

Why?

How?



We are **not** educating you for a first job. We want to give you the abilities to **think, reason, and question** for a lifetime.

*Drew Gilpin Faust, 28<sup>th</sup> President Harvard University*

Deciding to major in HCA was one of my best decisions. I continue to carry the things I learned from the program to my every career role thus far.

The **critical thinking and analyzing skills** I learned in your class have really **set me up for success** and I wanted to say thank you for everything.

*HCA Alumna*

*Medline Product Manager*

*Master in Healthcare Administration, University of Michigan*



# What is Critical Thinking?

# Exercise #1



1. Jot down your definition of critical thinking
2. Think of a situation where you thought critically
3. Think of a situation where you did not

Analyze and evaluate facts  
to guide decisions

Solve problems through a  
rational process

Draw logical conclusions

Think reflectively

Connect dots between ideas



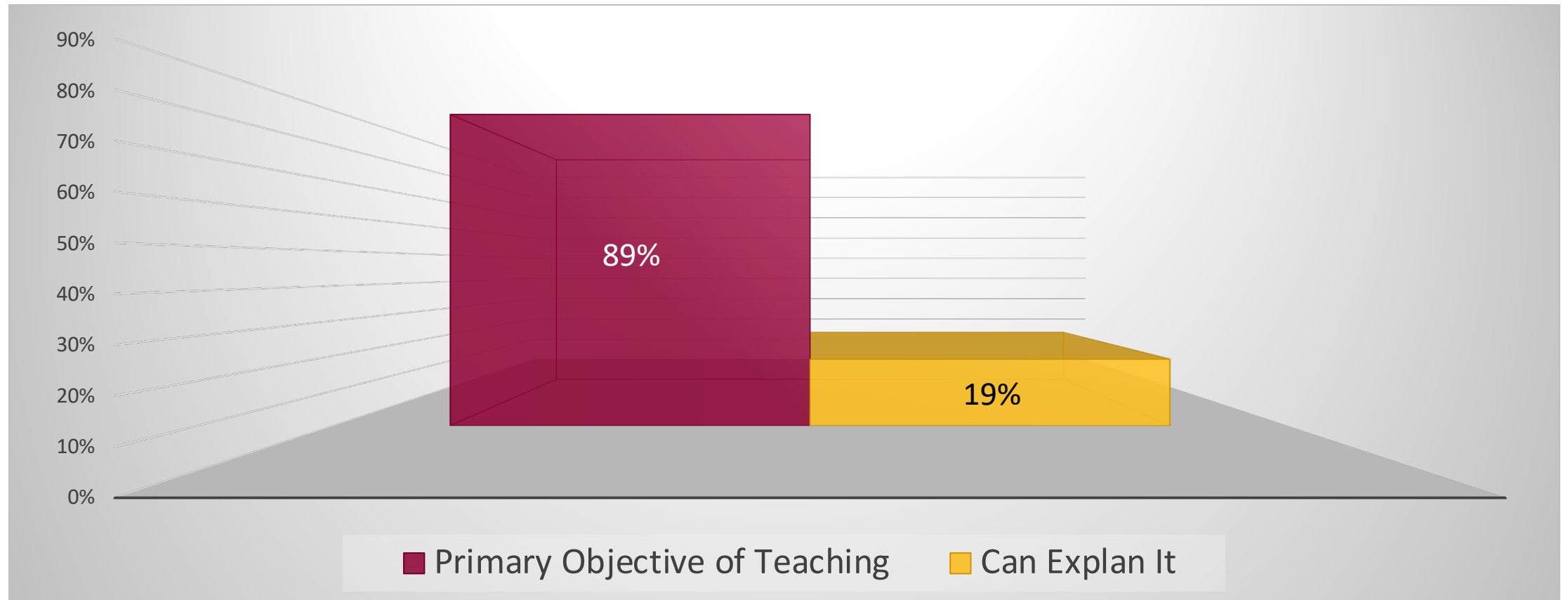
*Job, promotions, good  
grades, financial gain,  
good relationships*

*Bad decisions, costly  
errors, inaction, risky  
behavior, repeated  
mistakes*



# Disconnect Between Goals and Understanding

From a Study of Faculty at California Colleges and Universities





# A Definition:

## American Philosophical Association Study

- "Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based" (Facione, 1990, p. 2).
- An essential as a tool of inquiry
- A liberating force in education and a powerful resource in personal and societal life

# Dynamic Components of Critical Thinking

## Cognitive Processes

- Interpretation
- Analysis
- Evaluation
- Inference
- Explanation
- Self-regulation

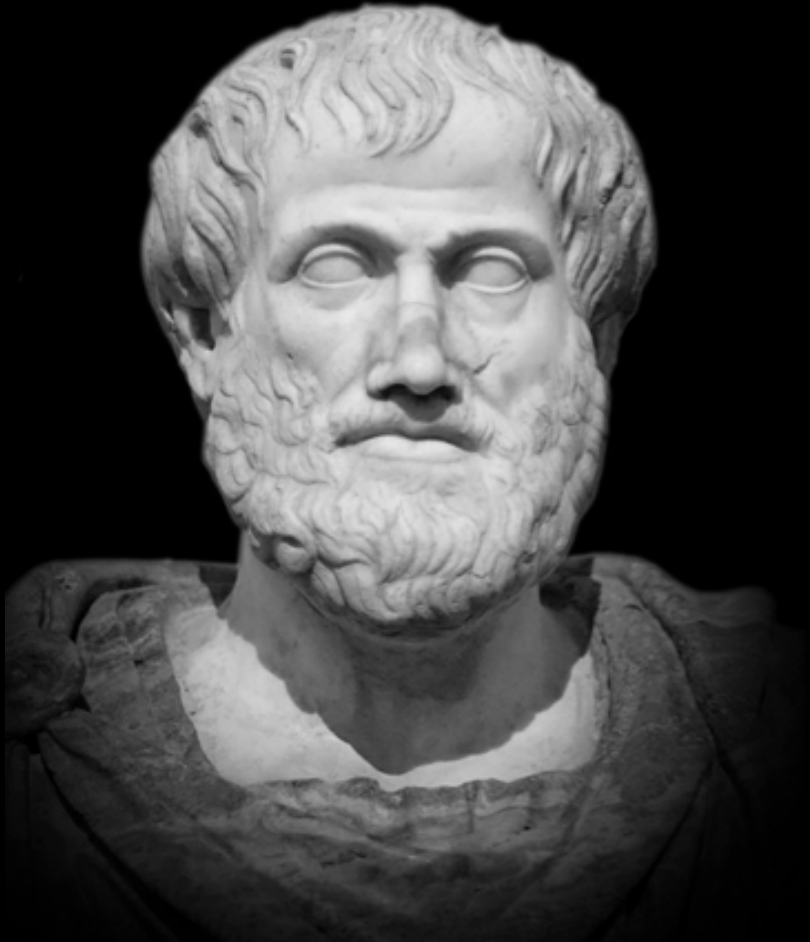
## Affective Dispositions

- Inquisitiveness
- Desire to be well-informed
- Awareness to use critical thinking
- Trust in reason
- Self-confidence in ability to reason
- Open-mindedness
- Flexibility
- Fair-mindedness
- Honesty to face personal biases
- Prudence in judgement
- Willingness to revise views (or grow)



# How Can We “Teach” Critical Thinking?

# An “Old Saw” That is Relevant to the Point

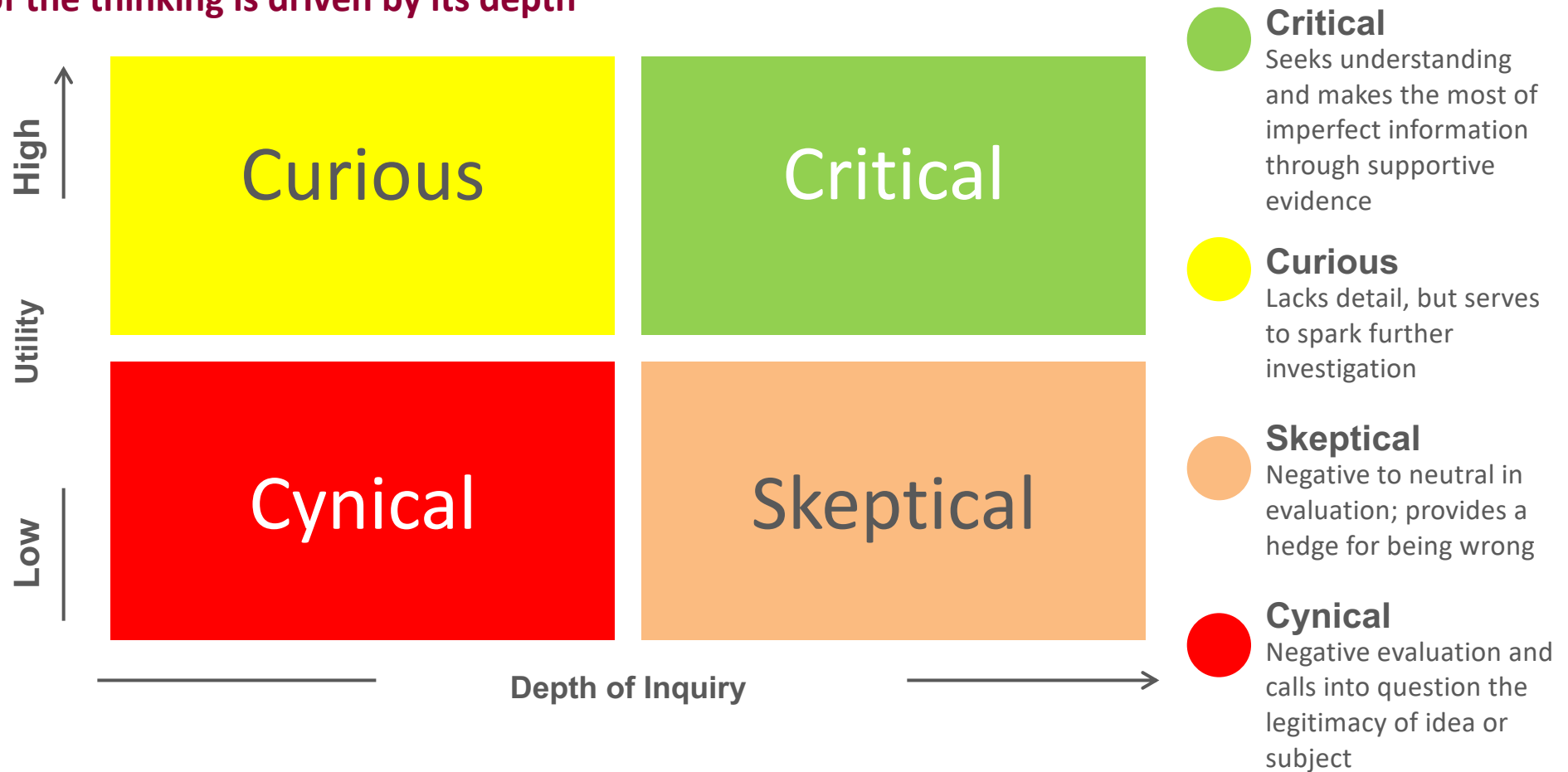


**EXCELLENCE IS AN ART WON BY TRAINING AND HABITUATION. WE DO NOT ACT RIGHTLY BECAUSE WE HAVE VIRTUE OR EXCELLENCE, BUT WE RATHER HAVE THOSE BECAUSE WE HAVE ACTED RIGHTLY. WE ARE WHAT WE REPEATEDLY DO. EXCELLENCE, THEN, IS NOT AN ACT BUT A HABIT.**

ARISTOTLE

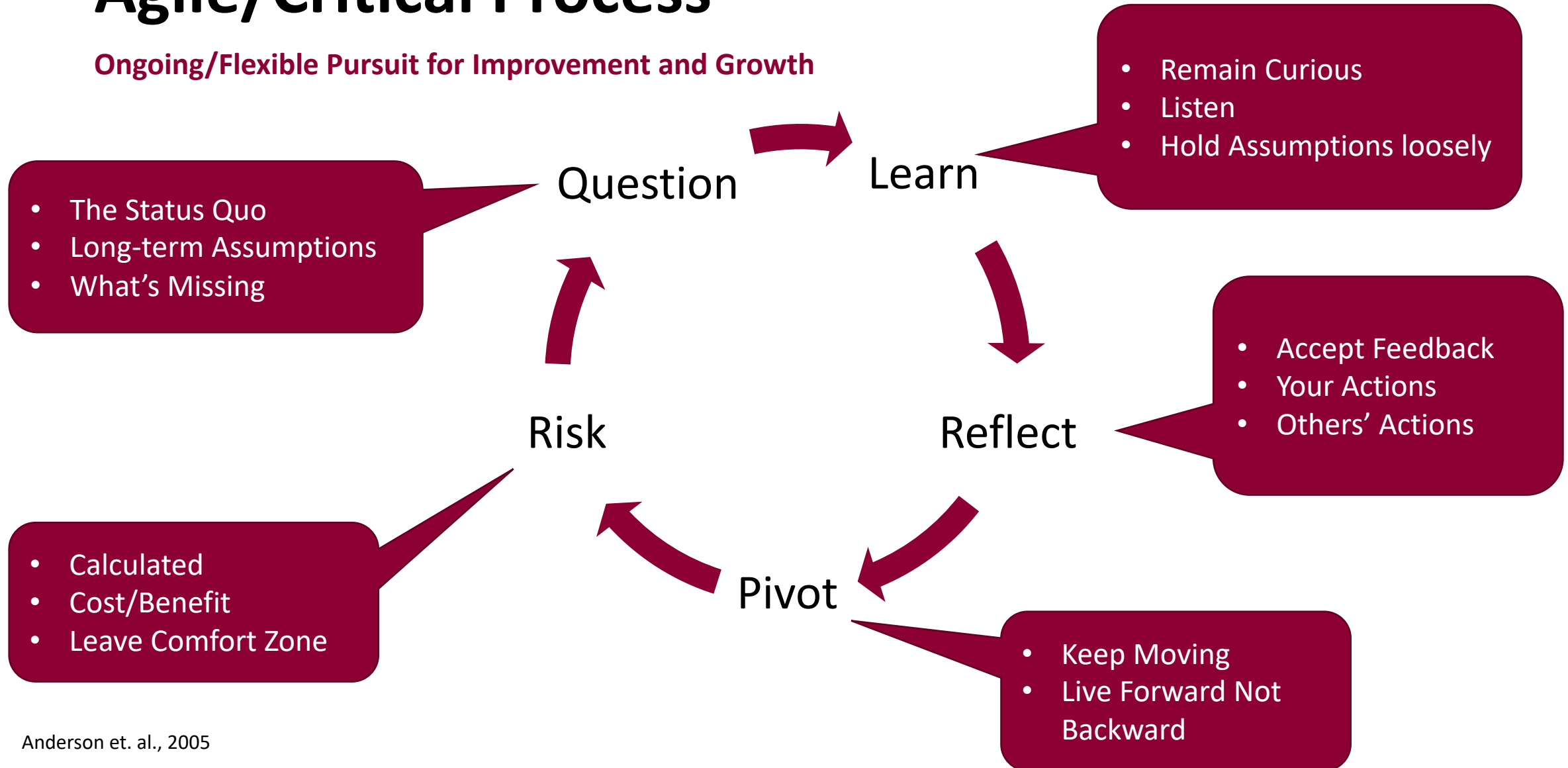
# Framework for Inquiry

Utility of the thinking is driven by its depth



# Agile/Critical Process

Ongoing/Flexible Pursuit for Improvement and Growth

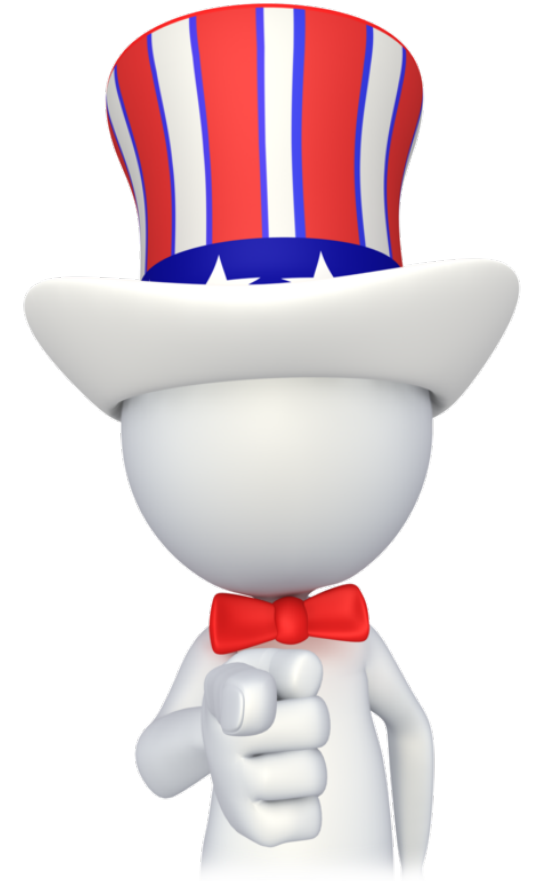


# Declaration of Interdependence

## Agile and adaptive approaches for linking people, projects and value

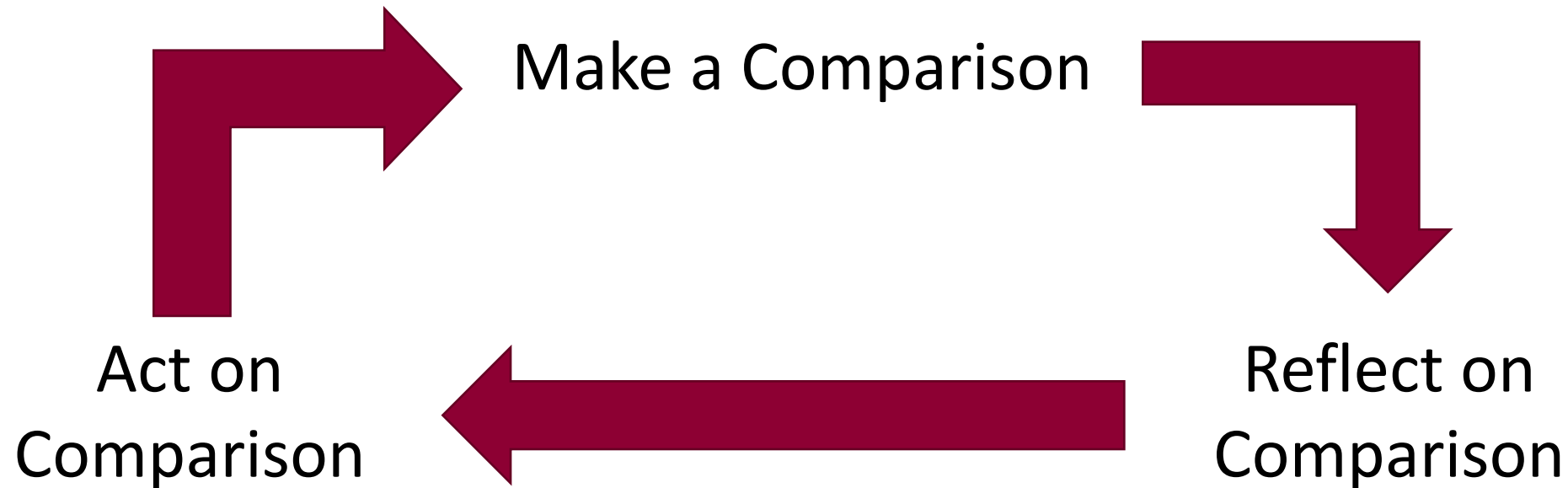
“We are a community of project leaders that are highly successful at delivering results. To achieve these results:

- We **increase return on investment** by making continuous flow of value our focus.
- We **deliver reliable results** by engaging customers in frequent interactions and shared ownership.
- We **expect uncertainty** and manage for it through iterations, anticipation, and adaptation.
- We **unleash creativity and innovation** by recognizing that individuals are the ultimate source of value and creating an environment where they can make a difference.
- We **boost performance** through group accountability for results and shared responsibility for team effectiveness.
- We **improve effectiveness and reliability** through situationally specific strategies, processes and practices.



# Engaging Students in Critical Thinking

It's Not Enough to Merely Demonstrate It – Practice Makes It Real





# Exercise #2



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Are our students users of information or receivers of information?



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# Bloomber**g**'s Taxonomy

## Critical Thinking

- Apply
- Analyze
- Synthesize
- Evaluate
- Justify

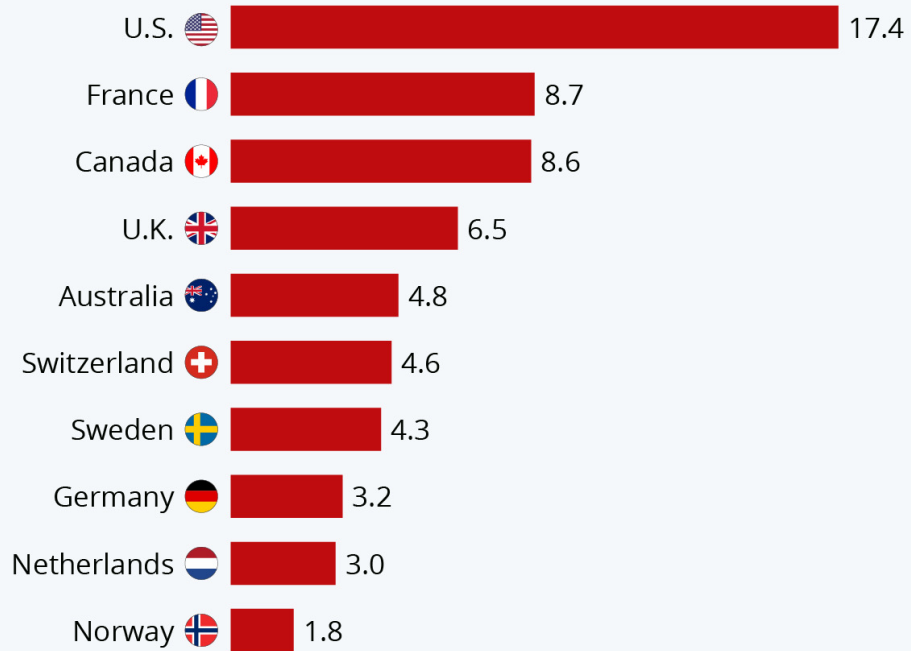
Do these verbs  
dominate your  
learning outcomes?



***Chasing the answers***

# High U.S. Maternal Mortality Rate

Maternal deaths per 100,000 live births in select countries for 2018

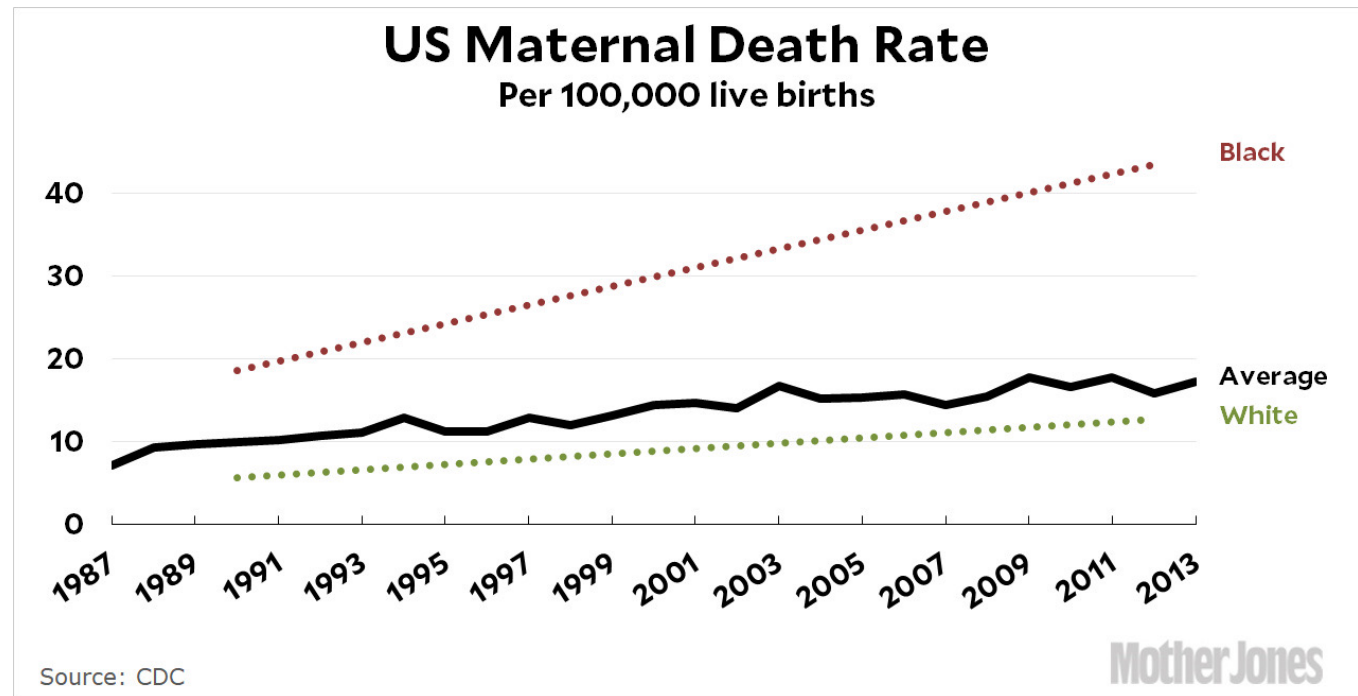


Data for Switzerland and U.K. from 2017, data for France from 2012  
Sources: OECD, Commonwealth Fund



## Data into Action

### Evidence-based policy recommendations



# Constantly Ask Questions

## Why

has maternal mortality increased over the past two decades?  
is maternal mortality higher than other developed countries?  
does maternal mortality differentially affect mothers who are black?

## What

changes to our health system occurred over these same two decades?  
environmental and socio-economic factors affect maternal mortality rates?

## Where

is maternal mortality increasing?  
is it all over the U.S. or in specific locations?

## Who

is affected by maternal mortality?  
beyond mothers and families who is affected? communities, health systems, payers?

## When

did this increase begin occurring?  
does maternal mortality take place, under what circumstances?

## How

can the health care system intervene?  
can government work to reduce maternal mortality?  
is the U.S. different than developed countries with lower rates?



Critical thinking is  
not driven by answers  
It is driven by the  
questions we ask



No one ever made us  
do this before

Practice

Structure

Confidence

Application



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## Problem

High recidivism for individuals with serious mental illness released from jail or prison

## Why?

Disease symptoms exacerbate

## Why?

Have no access to meds

## Why?

Disenrolled from Medicaid

## Why?


Receiving health care from justice system

## Why?

Arrested, often times due to symptoms

**Systemic**

The  
Five  
Why's



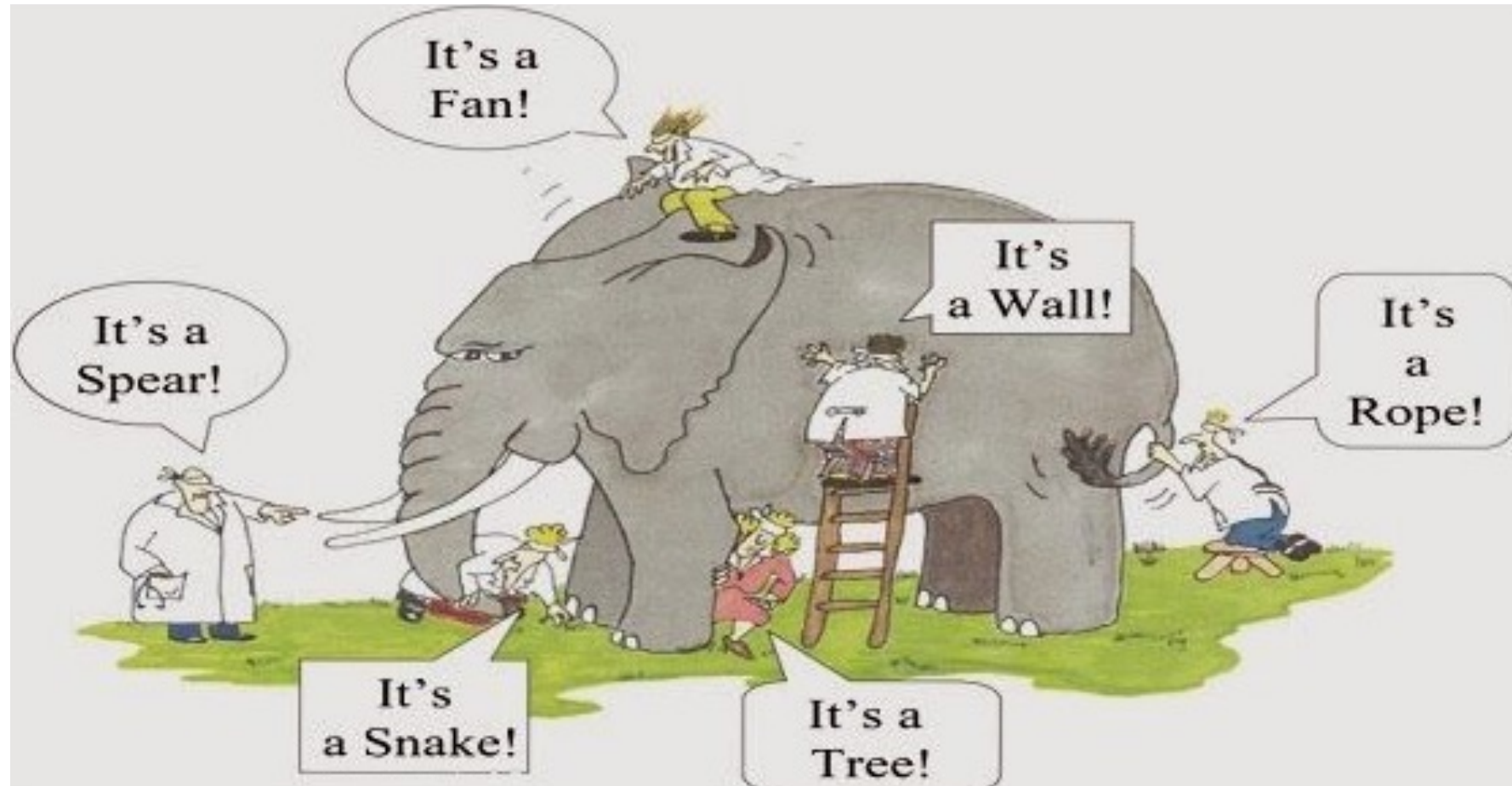
**Critical Thinking = Systems Thinking**

# Creating Connections



*“For the want of a nail the shoe was lost,  
For the want of a shoe the horse was lost,  
For the want of a horse the rider was lost,  
For the want of a rider the battle was lost,  
For the want of a battle the kingdom was lost,  
And all for the want of a horseshoe-nail.”*

# Recognizing Limitations and Context



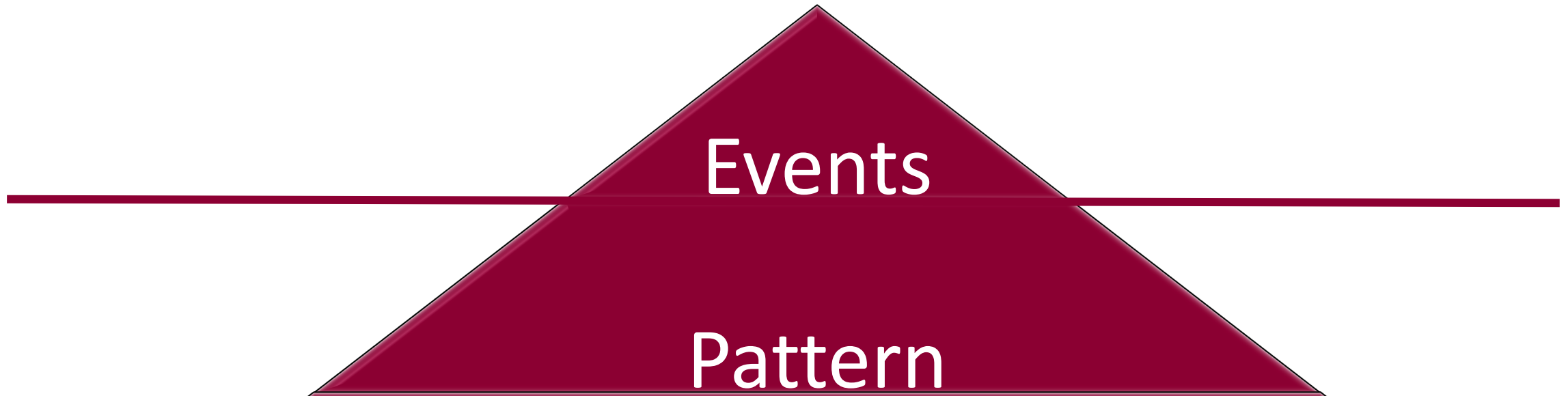
# Event Creates a Spark

What Happened?



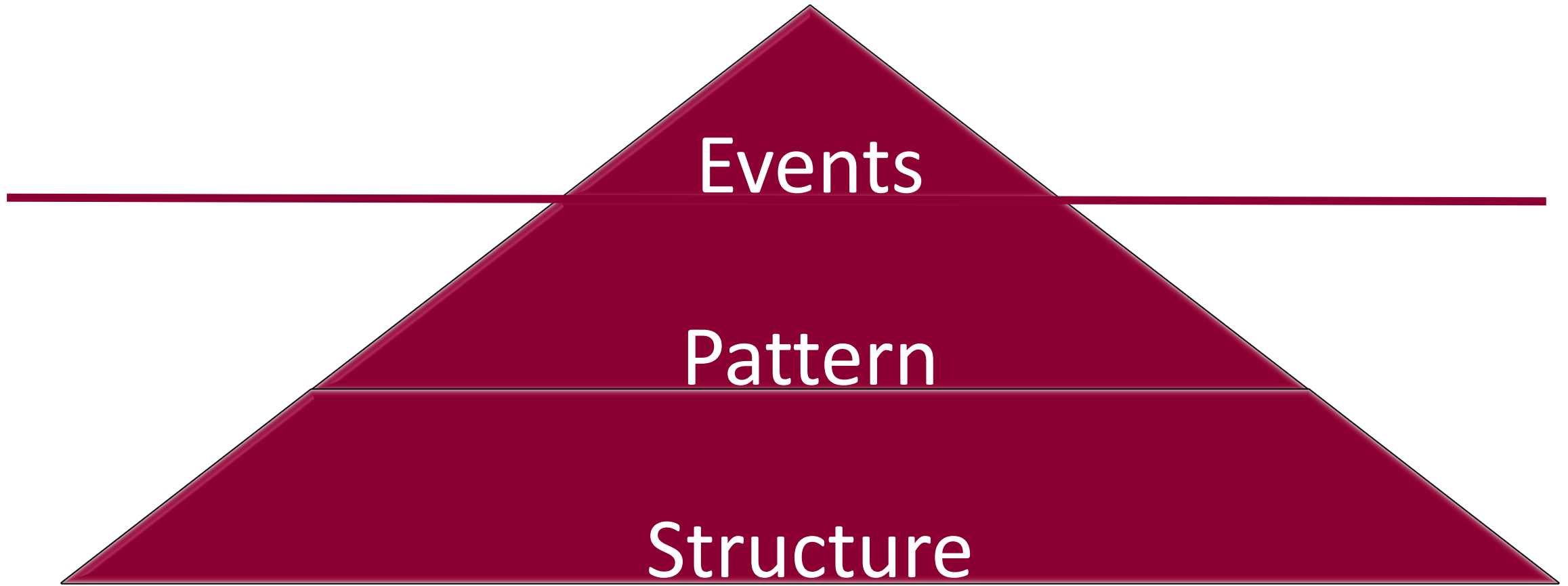
# Common or Special Occurrence?

Is This a One-Time Thing...Or Do We See a Trend?



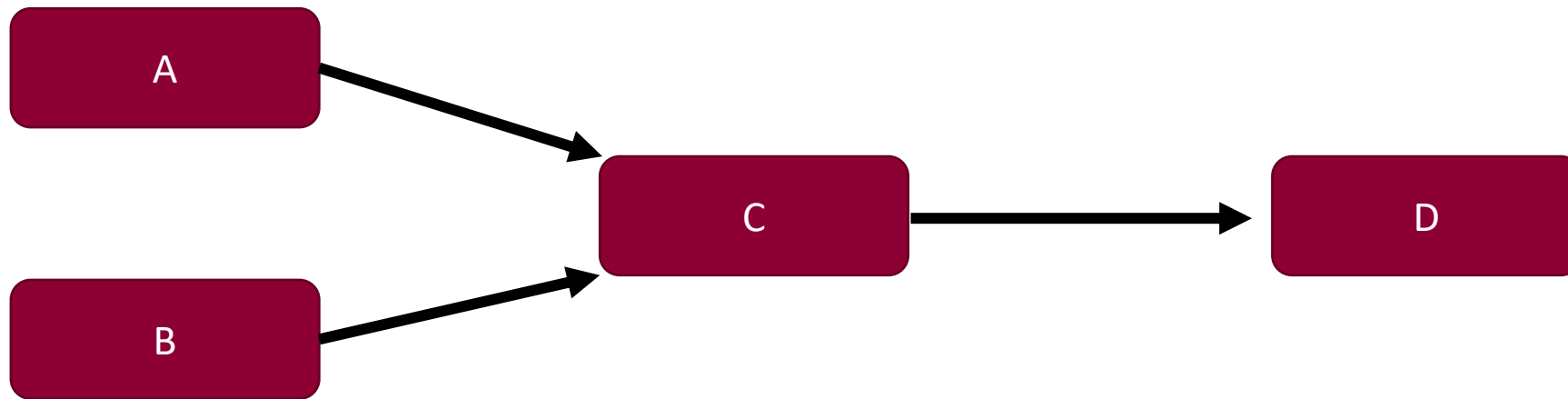
# Why Is This Happening?

*What forces are creating this behavior/situation to occur?*



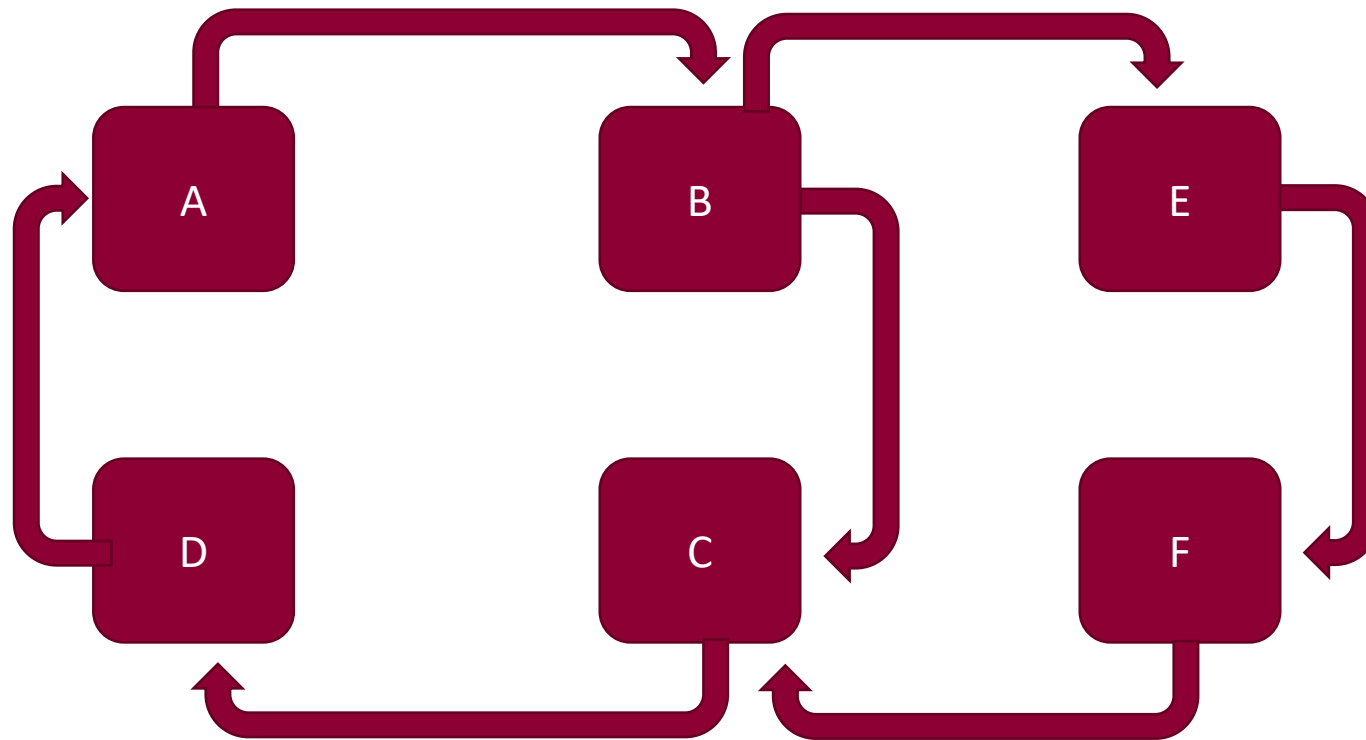
# Event-Orientation

Everything Can Be Explained By “Causal” Connections; Problems Are Ultimately Reduced Back to the “Root” Cause





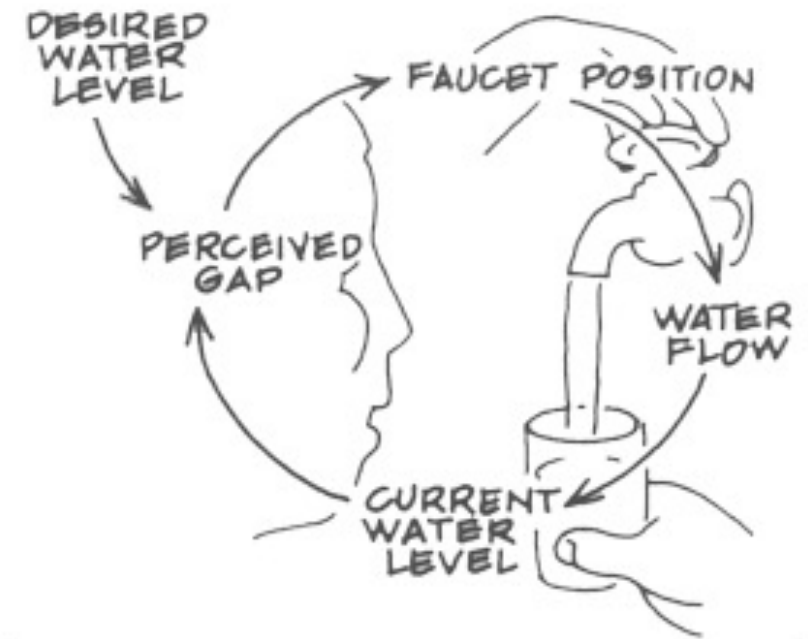
# Systems-Orientation



Behavior “emerges” from the structure of its feedback loops; root causes are not “individual”; rather they are relational to the feedback loops

# Differentiating Between Events & Systems

- Two types of thinking
  - Event Oriented
    - *“Each event has a cause”*
    - *“If you want to solve a problem, find the cause and fix that”*
  - Systems Oriented
    - *“The structure of the system (causes) misbehavior.*
    - *“To solve the problem, system structure must be understood & be redesigned to cause people to behave sustainably as a na*







# Systems Thinking

- ***Nonsummativity***
  - The state of a system is not the sum of its component parts<sup>1</sup>
- ***Systems Thinking***
  - “The art and science of making reliable inferences about behavior by developing an increasingly deep understanding of underlying structure”<sup>1</sup>

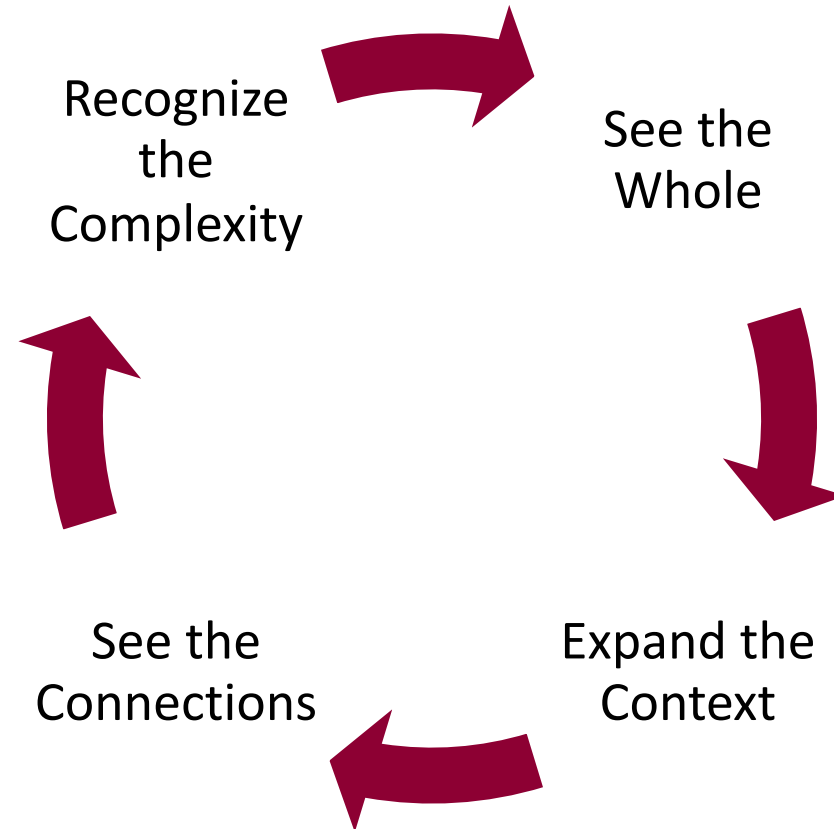
*“The Whole is Greater than  
the Sum of its Parts”*

*—Aristotle*

1. <https://www.yourdictionary.com/nonsummativity>

2. Richmond (1987)

# “A New Language”

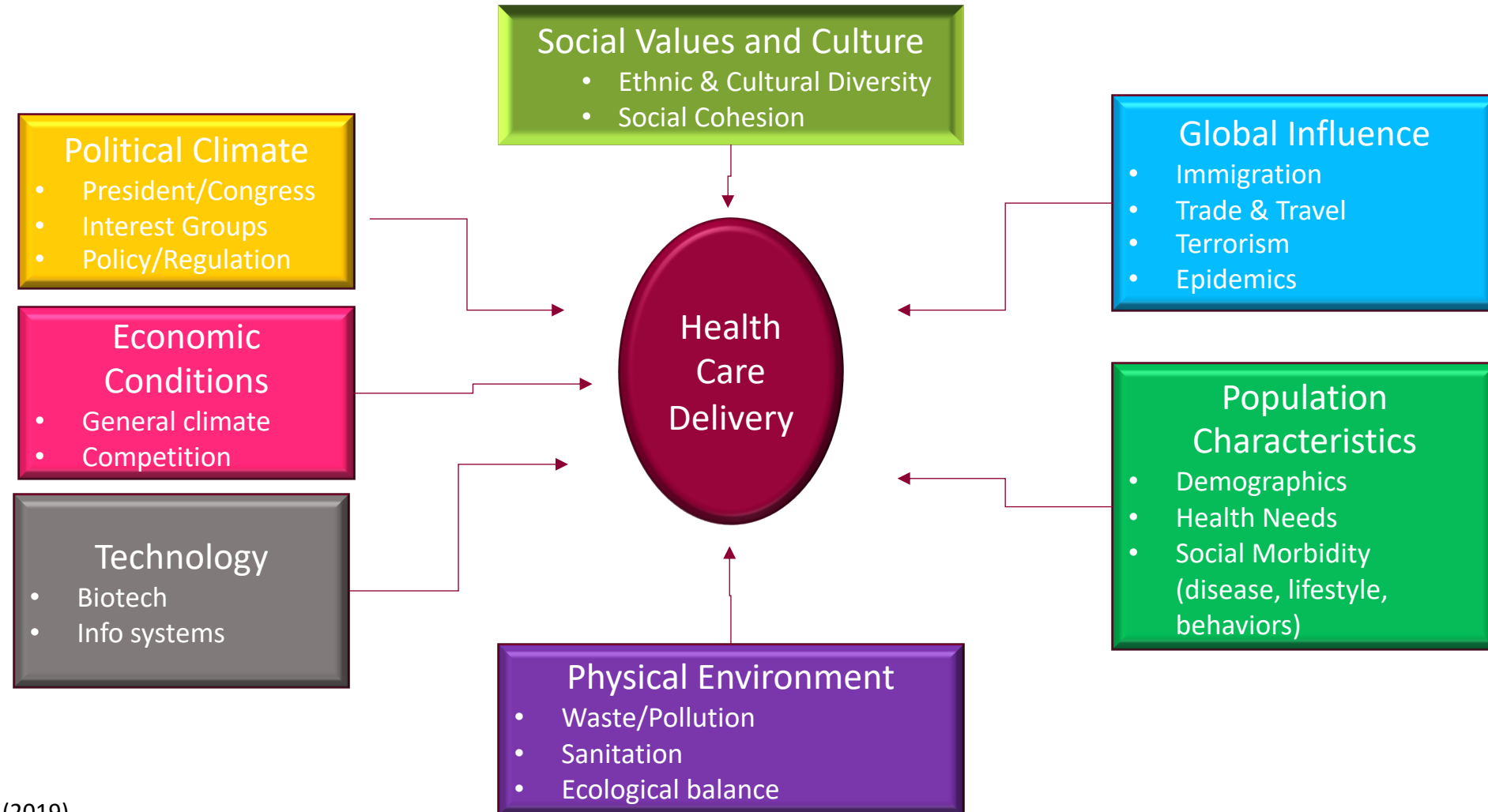


Johnson, Anderson, Rossow. (2020)

# Complex Adaptive Systems

- Composed of multiple, diverse, interconnected elements
- All are equally important
- Capable of change and learning (i.e., they are dynamic)

# External Forces Affecting Health Care Delivery





67.7%

# How we do it

## Healthcare Administration

### Curriculum

Service-Learning  
Writing Intensive  
Internship  
Capstone

### Classes

Case studies  
Client-facing projects  
Team bids  
Hack-a-thons  
Competitions  
Recommendations

### Extra-Curricular

Case Competitions  
Professional Essays  
Professional Debates  
Summer Internships  
Student Organization



the **W**rong **q**uestion

For career success.... "a candidate's demonstrated capacity to **think critically**, communicate clearly, and solve complex problems is **more important than his or her undergraduate major.**"  
**91%** of employers agree

# Key Concepts

## Critical Thinking

- Critical thinking is systems thinking
- Interconnectedness
- A learned skill
- Requires instruction and practice
- Instructional strategies actively engage student in learning process
- Goes beyond the content; focuses on process of learning the content
- Assessment techniques challenge the intellect rather than test memory recall



Beyond competence in one's field, organizations most value those who can *think critically*, communicate effectively, and lead ethically. In other words, those with a *Jesuit education*.

*Gonzaga University*



**THANK YOU**

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