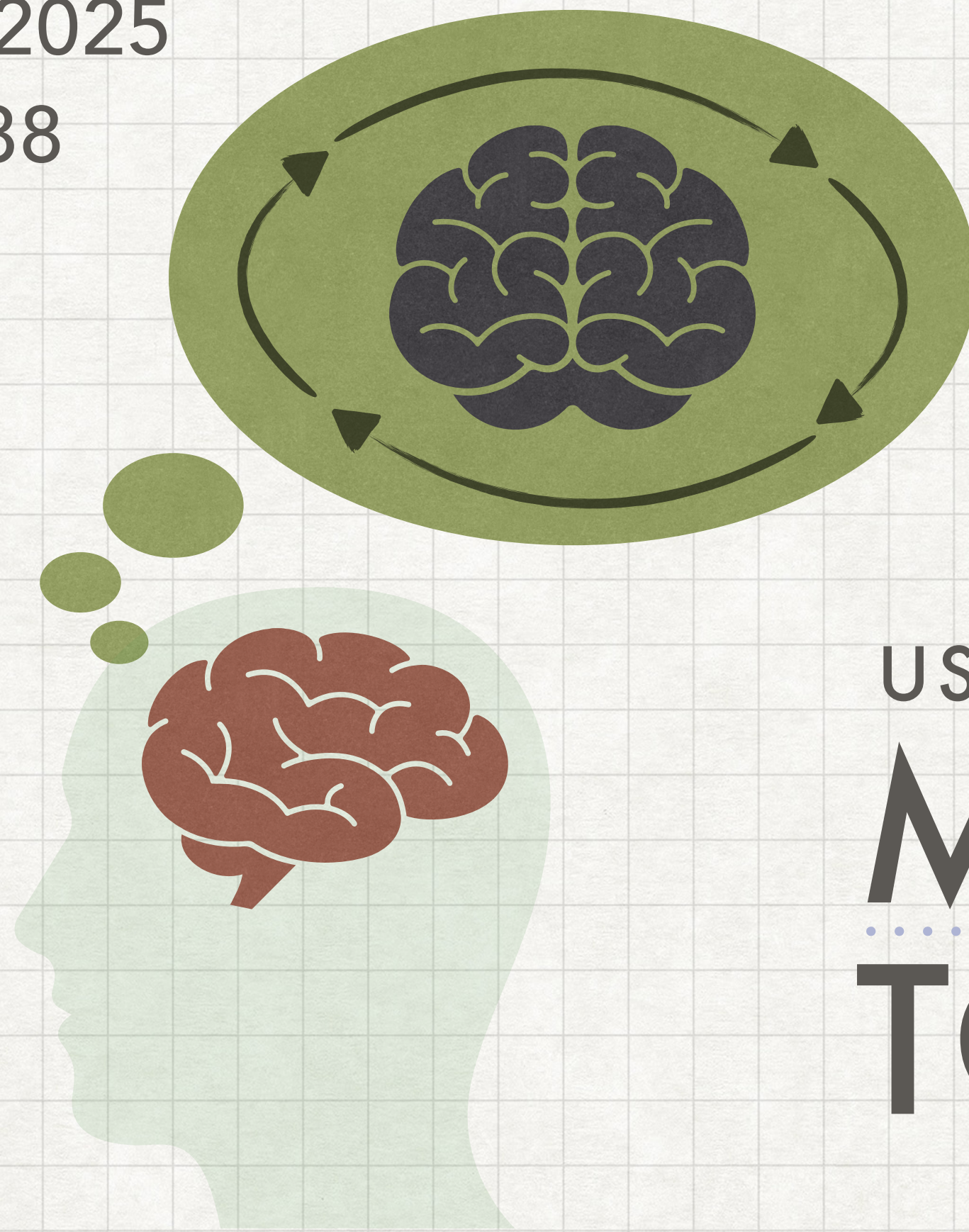


Summer 2025

SOWK 588

Week 03



USING
METACOGNITION
.....
TO CHECK BIASES
.....

Jacob Campbell, Ph.D. LICSW
Heritage University



AGENDA

- Engage in activities that illustrate metacognitive processes and thinking styles.
- Explore cognitive reflection and the difference between intuitive and analytical reasoning.
- Reflect on the impact of cognitive dissonance and bias in policy analysis.
- Apply systems thinking concepts to examine the limitations of conventional problem-solving.

PLAN FOR WEEK THREE

LEARNING OBJECTIVES

- Differentiate between System 1 and System 2 thinking and identify how each influences policy analysis and decision-making.
- Identify common forms of cognitive dissonance and describe how dissonance can cause bias.
- Recognize common cognitive traps and reflect on their potential impact.
- Apply principles of systems thinking to reframe conventional problem-solving approaches and anticipate unintended consequences in policy interventions.

METACOGNITION

Reflect on your
thought processes
and how you think.

Draw a graphical
representation



Consider the
relationship to cognitive
speed, emotion, and
motivation

YOUR THINKING STYLE DEVELOPING A VISUAL METAPHOR

Prompt:

HOW DOES YOUR
MIND PROCESS
INFORMATION
UNDER PRESSURE?



Image generated using OpenAI 2025

COGNITIVE REFLECTION TEST

SYSTEM 1 VS 2 THINKING

If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together?

(Toplak et al. 2014)

COGNITIVE REFLECTION TEST

SYSTEM 1 VS 2 THINKING

Jerry received both the 15th highest and the 15th lowest mark in the class. How many students are in the class?

(Toplak et al. 2014)



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COGNITIVE REFLECTION TEST

SYSTEM 1 VS 2 THINKING

A man buys a pig for \$60, sells it for \$70, buys it back for \$80, and sells it finally for \$90. How much has he made?

(Toplak et al. 2014)

SYSTEM 1



SYSTEM 2



REFLECTING ON THE SPEED OF COGNITION

- What are some of the benefits and challenges of each way of thinking?
- What are the use cases of system 1 and 2 thinking in general?
- How do each system's strengths/weaknesses show up in policy decisions?

COGNITIVE DISSONANCE

an internal intellectual and emotional dilemma we experience when there is a discrepancy (or tension or inconsistency) between an idea, concept, or belief that we hold as true or valid, and:

- Another idea, concept, or belief we also hold as true or valid,
- Actions we have previously taken or decisions we've made,
- The views of an admired public person or party,
- An ideology, political platform, or worldview to which we subscribe,
- The views of our social reference group, such as our friends, family, and colleagues,
- The way we earn our living, or
- Our sense of self-esteem, identity, and of who we are.

COGNITIVE DISSONANCE

an internal intellectual and emotional dilemma we experience when there is a discrepancy (or tension or inconsistency) between an idea, concept, or belief that we hold as true or valid, and:

SMALL GROUP DISCUSSION

What kinds of information or perspectives would make you feel cognitive dissonance about that position?

How might cognitive dissonance influence the way we analyze social problems or recommend policies?

(Linguiti, 2022, p. 120)

- Another idea, concept, or belief we also hold as true or valid,
- Actions we have previously taken or decisions we've made,
- The views of an admired public person or party,
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- The way we earn our living, or
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BE ABLE TO
CHECK OUR
BIASES

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Eight artificial dyes will be phased out of US food supply, Health Secretary RFK Jr. says

Swapna Venugopal Ramaswamy
USA TODAY

April 22, 2025 | Updated April 23, 2025, 9:52 p.m. ET

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No Kings Day rallies are set to take place in more than 1800 cities.

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'No Kings Day' organizers aim to reclaim American flag during nationwide protests

In all 50 states, grassroots groups are organizing "No Kings Day" rallies to oppose Donald Trump's military parade, set to take place on his birthday.

Eight artificial dyes will be eliminated from medications and the nation's food supply by the end of 2026, including those found in candy, ice cream, soft drinks and jams, according to Health and Human Services Secretary Robert F. Kennedy Jr.

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SCARED STRAIGHT

1999

SCARED STRAIGHT PROGRAMS AS A STAND- ALONE STRATEGY ARE NOT EFFECTIVE

These randomized trials, conducted over a 25-year period in eight different jurisdictions, provide evidence that 'Scared Straight' and other 'juvenile awareness' programs are not effective as a stand-alone crime prevention strategy. More importantly, they provide empirical evidence under experimental conditions - that these programs likely increase the odds that children exposed to them will commit offenses in future. Despite the variability in the type of intervention used, ranging from harsh, confrontational interactions to tours of the facility converge on the same result: an increase in criminality in the experimental group when compared to a no-treatment control. **Doing nothing would have been better than exposing juveniles to the program.**

(Petrosino et al., 2013, p. 31, emphasis my own)

SEEMINGLY WELL-INTENTIONED INTERVENTIONS

CAN SOMETIMES PRODUCE THE OPPOSITE RESULT WHEN:

- Address symptoms rather than underlying problems.
- Seems obvious and often succeeds in the short run.
- Achieve short-term gains that are undermined by longer-term impacts.
- Produce unintentional negative consequences.
- Leads us to assume that we are not responsible for the problem recurrence.

THINKING OF THE WHOLE AS AN
INTERCONNECTED SET OF
ELEMENTS ORGANIZED IN A WAY
THAT IT UNDERSTANDS THE
CONNECTIONS SO AS TO ACHIEVE
A DESIRED PURPOSE.

CONVENTIONAL VERSUS SYSTEMS THINKING

Conventional Thinking

The connection between problems and their causes is obvious and easy to trace.

Others, either within or outside our organization, are to blame for our problems and must be the ones to change.

A policy designed to achieve short-term success will also assure long-term success.

In order to optimize the whole, we must optimize the parts.

Aggressively tackle many independent initiatives simultaneously.

Systems Thinking

The relationship between problems and their causes is indirect and not obvious

We unwittingly create our own problems and have significant control or influence in solving them through changing our behavior.

Most quick fixes have unintended consequences: They make no difference or make matters worse in the long run.

In order to optimize the whole, we must improve relationships among the parts

Only a few key coordinated changes sustained over time will produce large systems change.

QUESTIONS

FOCUS

ACTION OR RESPONSE

What happened?

EVENTS

React
Firefight

What's been happening?

TRENDS & PATTERNS

Anticipate
Forecast

Why

SYSTEMS STRUCTURE

Change
Create

Pressures
Policies
Power Dynamics
Perceptions
Purpose

Leverage Learning

Iceberg from
Vecteezy

(Adapted from Innovation Associates Organizational
Learning as cited in Stroh, 2015, Figure 3.2)

COGNITIVE TRAPS

THREE AREAS WE MIGHT FALL INTO

Downsides of Defending Against Dissonance

- Selective Exposure and Compartmentalization
- Confirmation and Disconfirmation Bias
- Group Bias: The Halo and Horns Effect
- Aversion to Uncertainty and Risk

Mood-Driven Mistakes

- Priming
- Backfire Effect
- Overconfidence Trap

Mental Missteps

- Framing
- Anchoring
- Availability and Mirror Imaging
- Coherence and the WYSIATI Phenomenon