A Visual Exploration of Decision-making; Evolving the Law Enforcement Frame

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INTRODUCTION

One of the core components of law enforcement is decision-making. Whether the decision is tactical and time-constrained or strategic and interacting with the community, the decision is that transition between understanding and action. A decision is ultimately both an outcome and a contributor to its system. It evolves from the understanding that precedes it. Its outcomes and consequences then ripple out, providing the next round of input to the system or model (Capra & Luisi, 2014; Checkland, 1999).

Research focusing on sensemaking/decision-making is continually evolving (Klein, Moon, & Hoffman, 2006a, 2006b). A systems approach is an alternative way to frame decision-making. Methods and models exist that could foster empathy, the inclusion of diverse perspectives, and a focus on exploration and understanding first.

PURPOSE & PREMISE

This poster presents examples of visual models that may help in reframing the sensemaking/decision-making narrative for law enforcement.

- Premise: There is value in applying systems-based cognitive frameworks and models to law enforcement decision-making.
- Premise: There is value in exploring-researching the sensemaking process that precedes decision-making to better evolve decision-making models for law enforcement.

Ultimately its goal is to provide a starting point for conversations to evolve the decision-making in policing.
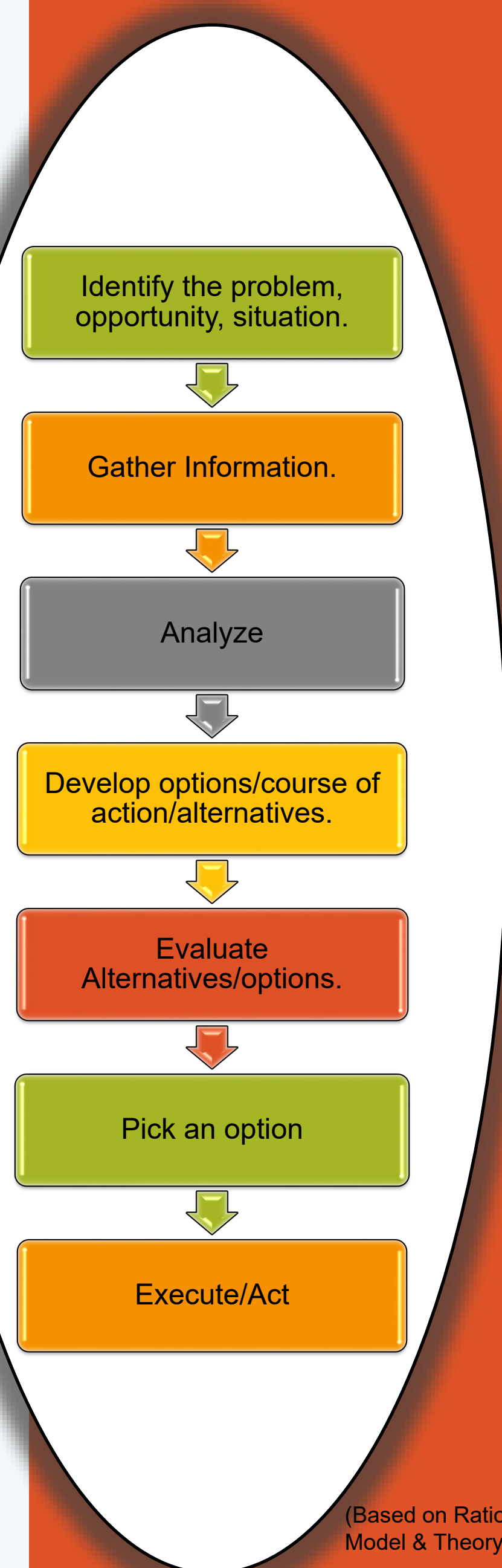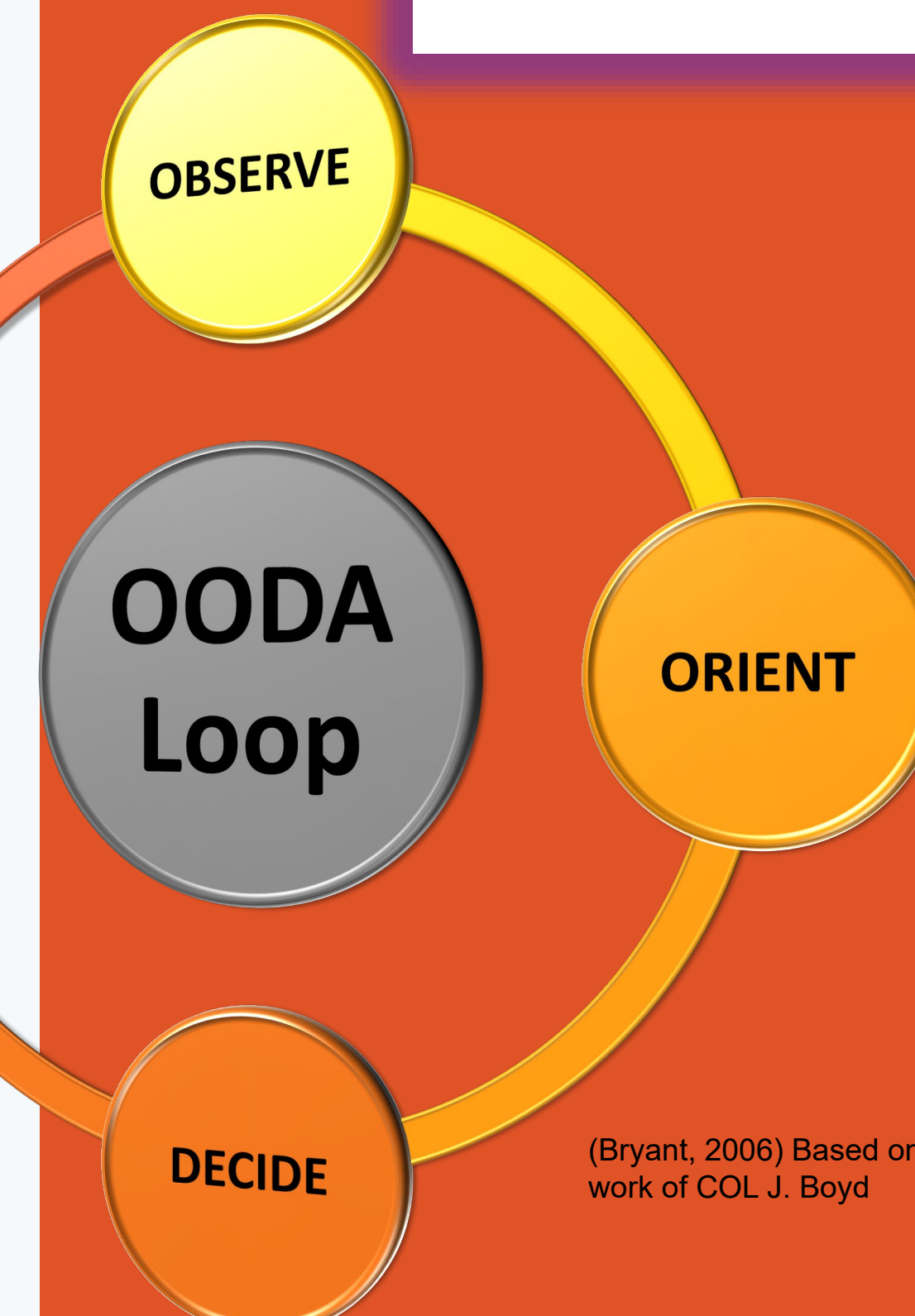
METHODOLOGY

Design: Exploratory, secondary research (cross-discipline from decision science and business, cursory/limited literature review, and source examination).

Intent: Highlight potential areas and conceptual-cognitive models of future research. Suggested research methods might include case studies, operational research, and PLS-SEM modeling.
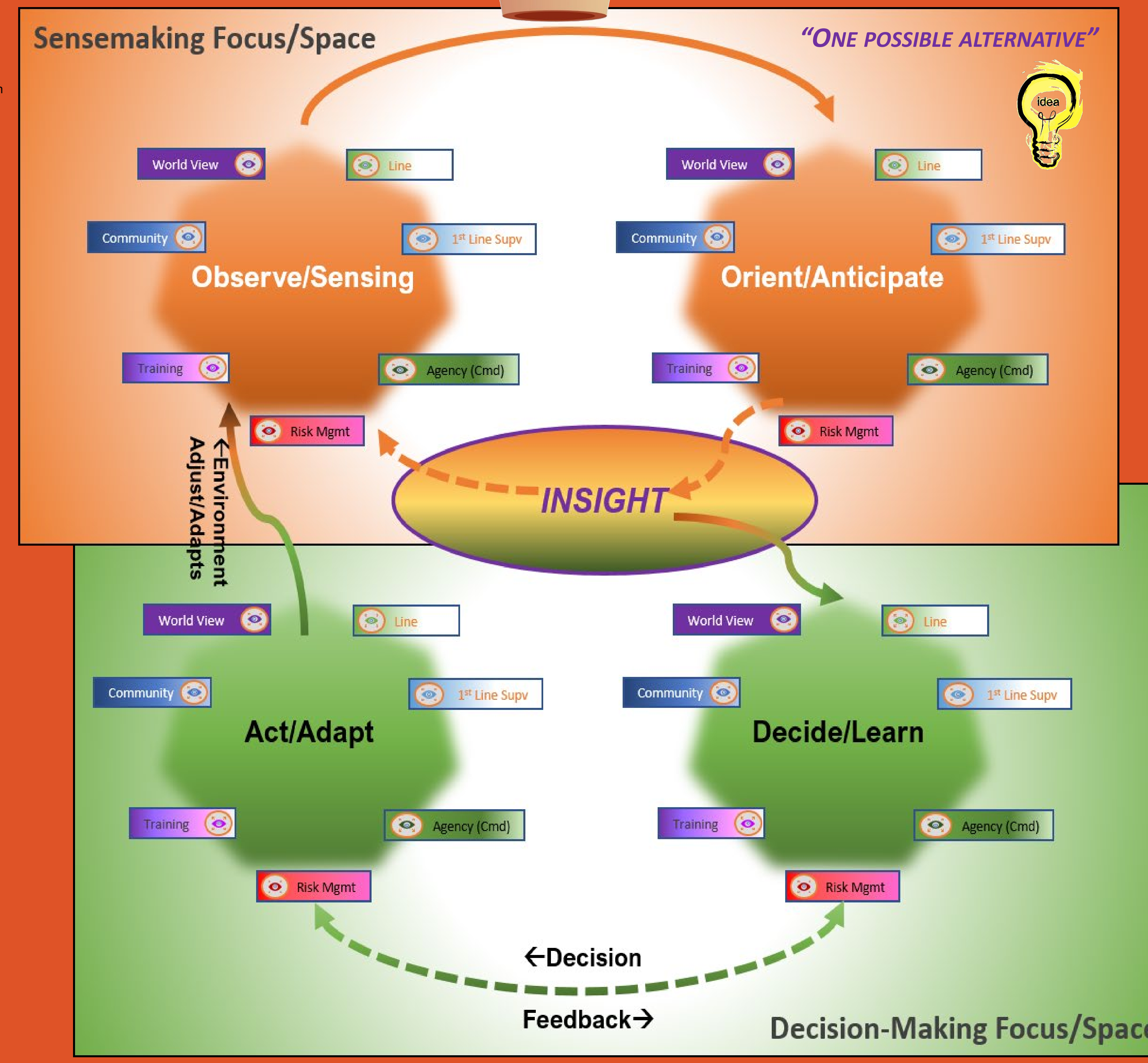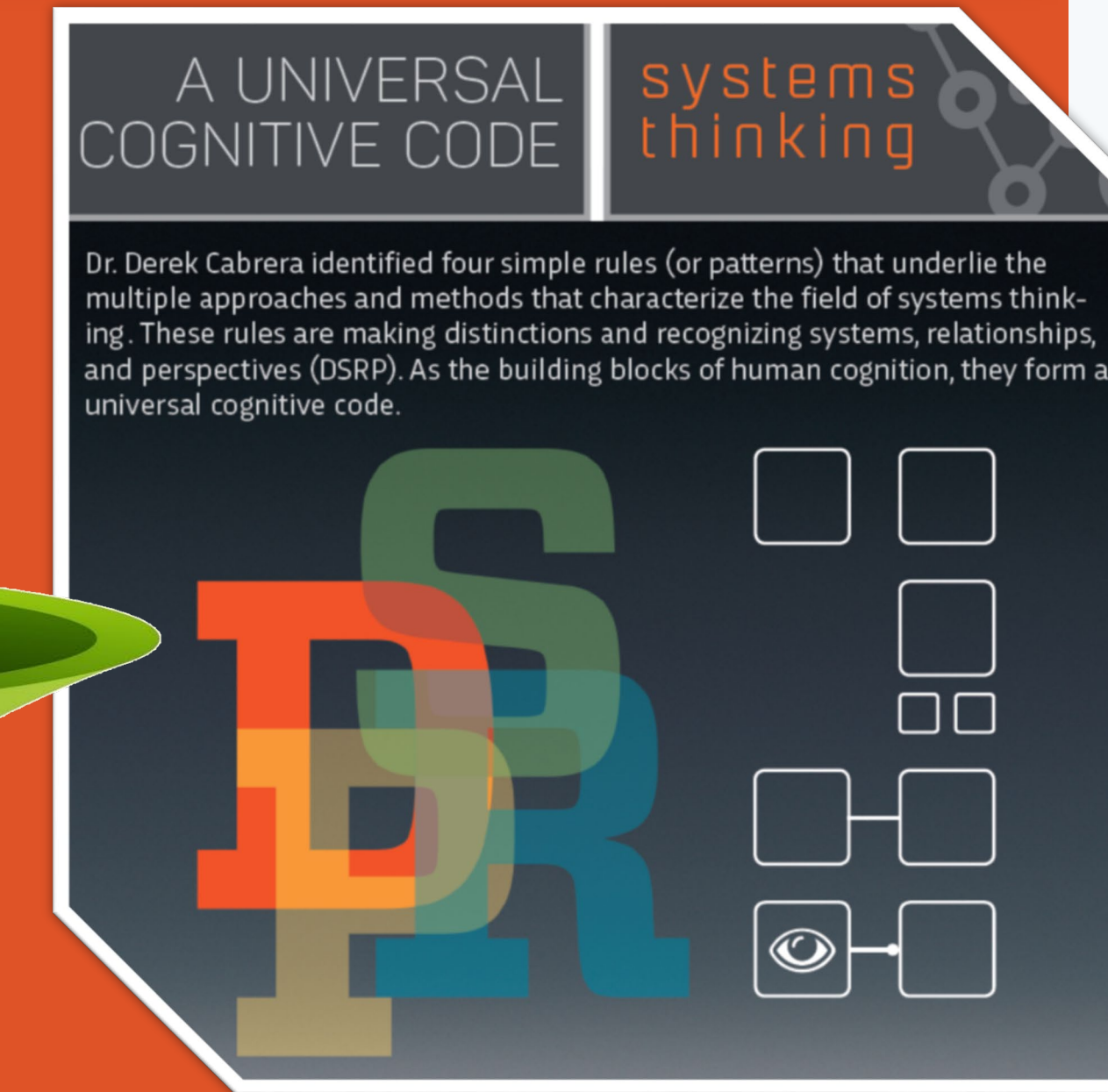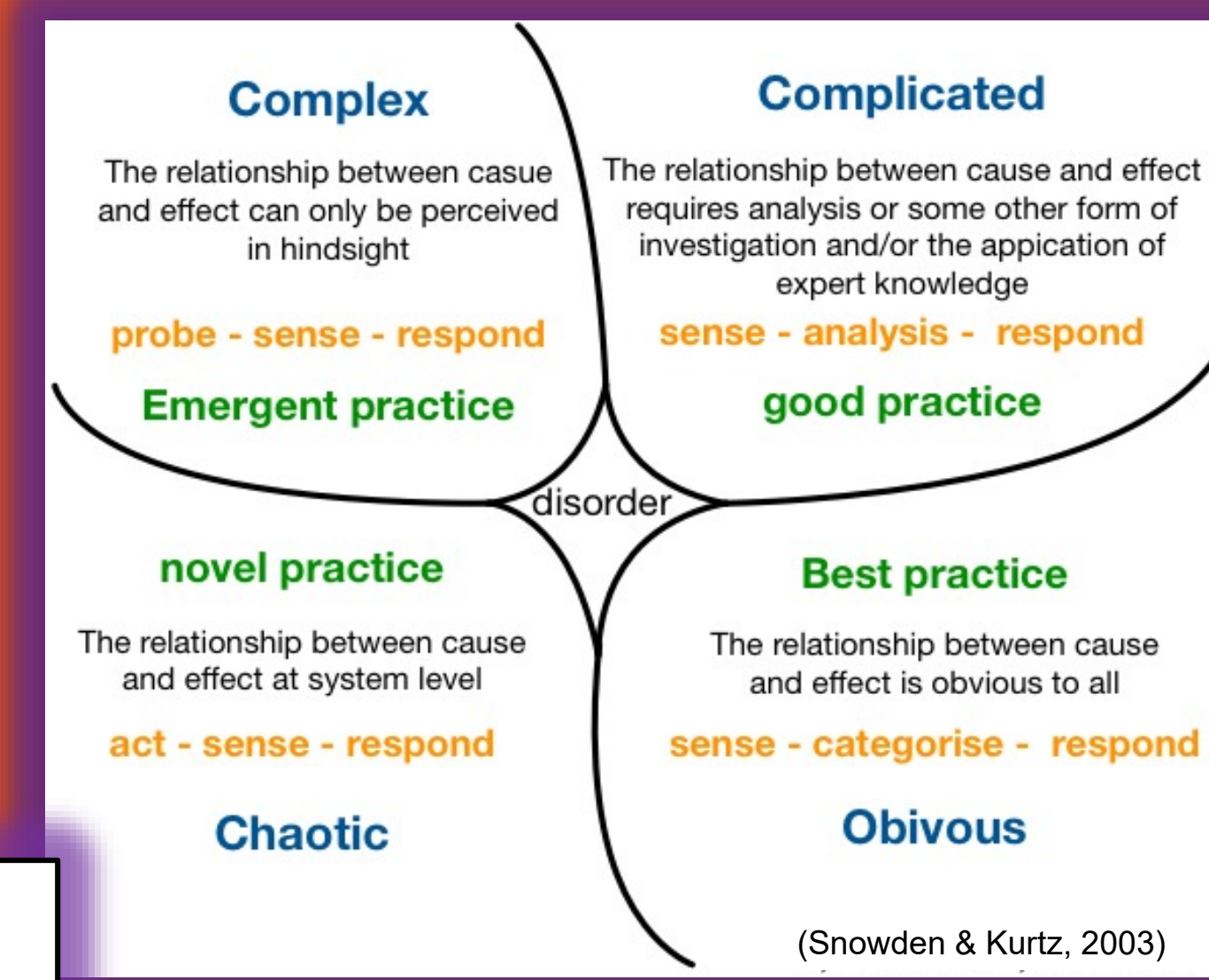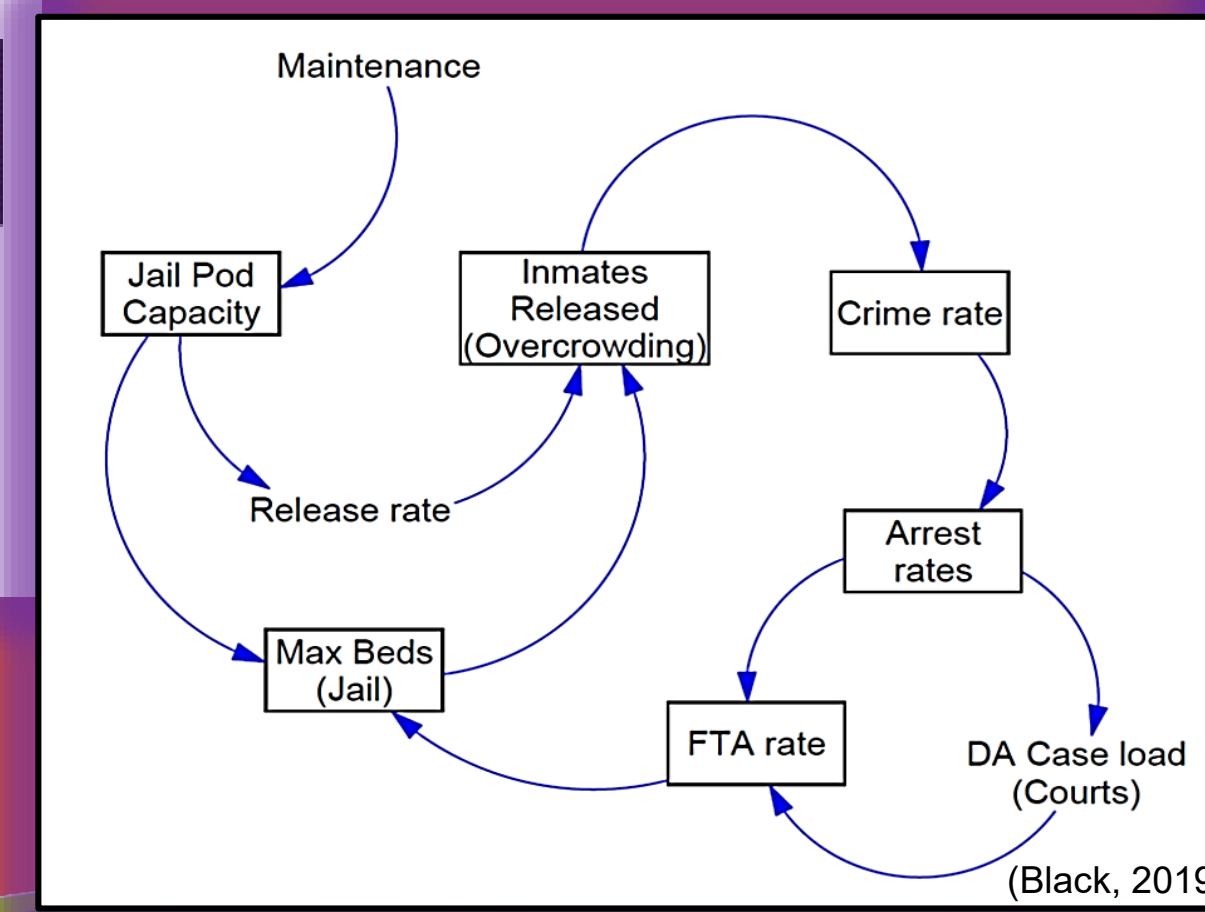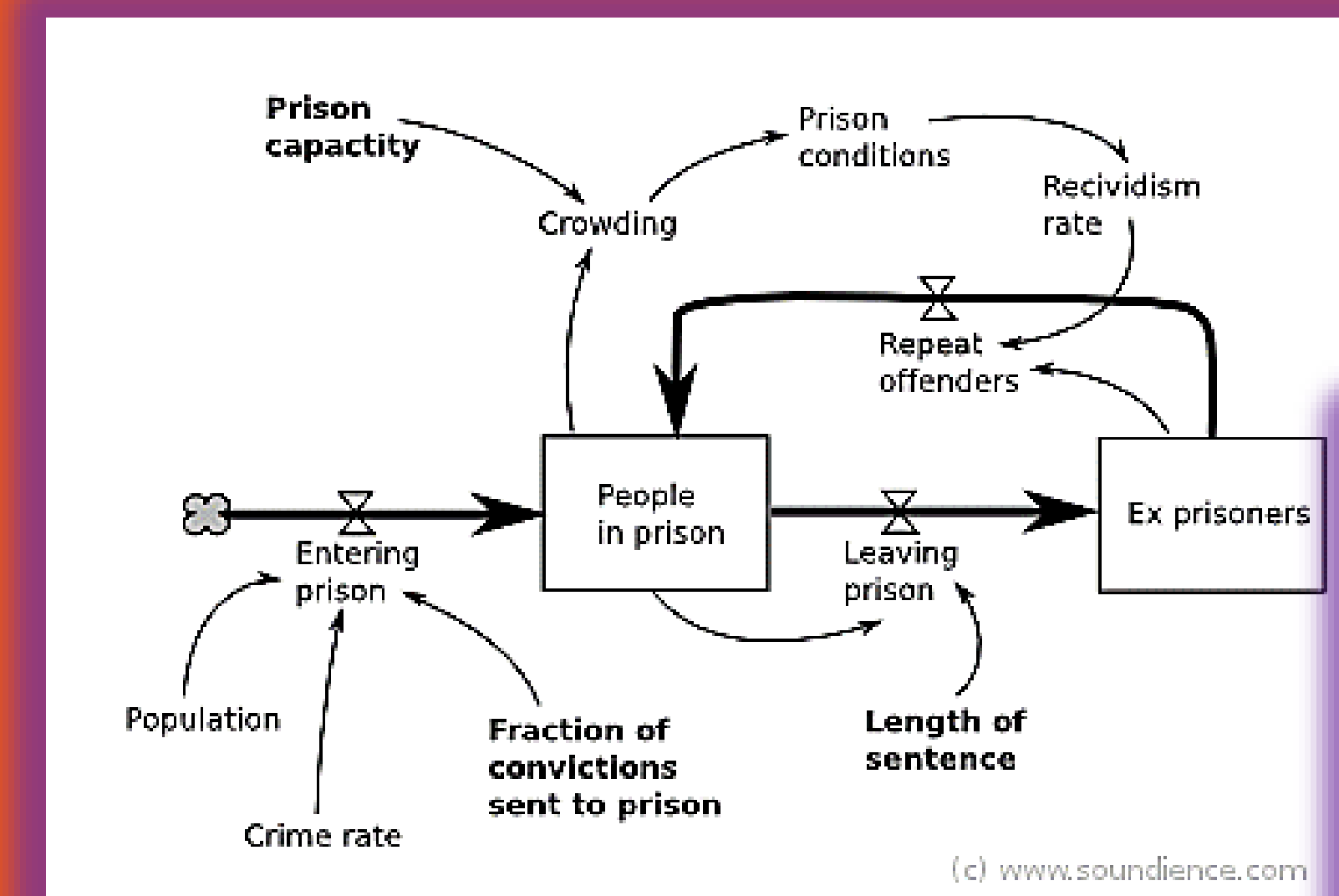
DISCUSSION (OLD-Current Model)

The current decision-making paradigm often found in law enforcement is solution-centric, linear, and shortchanges the sensemaking-understanding space and its value.

- It assumes we know or can know the problem with certainty.
- It assumes we can discern the outcome that will fix the problem. (CAS/Complexity = emergence + uncertainty)
- Its frameworks are not designed for wicked problems and CAS.

(Bryant, 2006) Based on work of COL J. Boyd

OODA Loop — OBSERVE, ORIENT, DECIDE, ACT

Identify the problem, opportunity, situation.
↓
Gather Information.
↓
Analyze
↓
Develop options/course of action/alternatives.
↓
Evaluate Alternatives/options.
↓
Pick an option
↓
Execute/Act

(Based on Rational Decision Model & Theory, (Simon, 1979))

> "Like a pane of glass framing and subtly distorting our vision, mental models determine what we see."
>
> -Peter Senge

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(Black, 2019)

Complex
The relationship between cause and effect can only be perceived in hindsight
probe - sense - respond
Emergent practice

Complicated
The relationship between cause and effect requires analysis or some other form of investigation and/or the application of expert knowledge
sense - analysis - respond
good practice

disorder

novel practice
The relationship between cause and effect at system level
act - sense - respond
Chaotic

Best practice
The relationship between cause and effect is obvious to all
sense - categorise - respond
Obivous

(Snowden & Kurtz, 2003)

A UNIVERSAL COGNITIVE CODE — systems thinking

Dr. Derek Cabrera identified four simple rules (or patterns) that underlie the multiple approaches and methods that characterize the field of systems thinking. These rules are making distinctions and recognizing systems, relationships, and perspectives (DSRP). As the building blocks of human cognition, they form a universal cognitive code.

(Cabrera, D. & Cabrera, L., 2015)

Sensemaking Focus/Space

"ONE POSSIBLE ALTERNATIVE"

Observe/Sensing — World View, Line, Community, 1st Line Supv, Training, Agency (Cmd), Risk Mgmt

Orient/Anticipate — World View, Line, Community, 1st Line Supv, Training, Agency (Cmd), Risk Mgmt

←Environment Adjust/Adapts

INSIGHT

Act/Adapt — World View, Line, Community, 1st Line Supv, Training, Agency (Cmd), Risk Mgmt

Decide/Learn — World View, Line, Community, 1st Line Supv, Training, Agency (Cmd), Risk Mgmt

←Decision

Feedback→

Decision-Making Focus/Space

(Black, 2018)

Discussion (Evolve the models = Reframe)

- We can shift/evolve the mental models and begin to become more sensemaking-centric (explore, understand, & learn)
- Visualizing alternative mental models serves as a first step. We can learn/explore/play with them and their inherent frameworks. From them, we can develop more nuanced and discretion in our sensemaking-understanding and, subsequently, our decisions.

Discussion (Examples we can learn from)

- Systems modeling = Standard practices such as causal design loops (CDL) and stock and flow diagramming found in systems research (Sterman, 2000). These models/visualization methods allow for the system to be viewed as a whole and in a nonlinear fashion.
- Systems Thinking/Approach = The ability to look at something from sets of dimensions such as systems within systems, relationships, multiple perspectives, and the distinctions between the parts and the whole. Focusing on the relationships between the objects and how they interact (Cabrera, D. & Cabrera, L., 2015a, 2015b; Capra & Luisi, 2014).
- Cynefin and Sensemaking-centric focus = Recognizing that in complex systems, sensemaking is critical, and therefore the need to probe-sense-response is fundamental (Snowden & Kurtz, 2003).
- Heuristics-Sensemaking = Heuristics are found in LE training and can save lives or produce tragedy. Could research be used to enhance and train the "best" heuristics (Mousavi & Gigerenzer, 2014).

A myriad of other examples exists with the core tenant being that of understanding knowing that any solution applied against the situation invents the next problem. One manages wicked problems/complex systems and their issues; they are not solved (Brown, Harris, & Russell, 2010). A systems-thinking approach, a focus on sensemaking, to develop the decision-maker that solves the next problem in a CAS.

SUMMARY

1. OLD-Current paradigm
   a) **Models** = Linear (Decision trees, linear process, etc.)
   b) **Focus** = Understand just enough to get to the solution. Solution-centric.
   c) **Approach** = Reduce, eliminate, narrow choices. Exclude, detect anomalies and discard. Whatever is left = choice.
   d) **2nd order effects** = Binary thinking (this or that/Yes or No/Good or bad), Adversarial type dialogue, defensiveness.

2. Alternatives/evolution
   a) **Models** = Non-linear (CDL, Stock & Flow, Frameworks.)
   b) **Focus** = Understand, explore, learn, detect patterns and anomalies…solutions will precipitate. Sensemaking-centric.
   c) **Approach** = Inclusion, multi-perspective, systems based.
   d) **2nd order effects** = Value based, better or worse options vs right and wrong, Focus on shared understand prior to shared commitment. Empathy.

Evolve models → Expand one's frames → Modify one's approach/thinking → Understanding changes = Shared understanding → Decisions Evolved