Thinking about Data *for* Continuous Improvement

Kirsten Kainz

June 14, 2018

UNC SCHOOL OF SOCIAL WORK Jordan Institute for Families

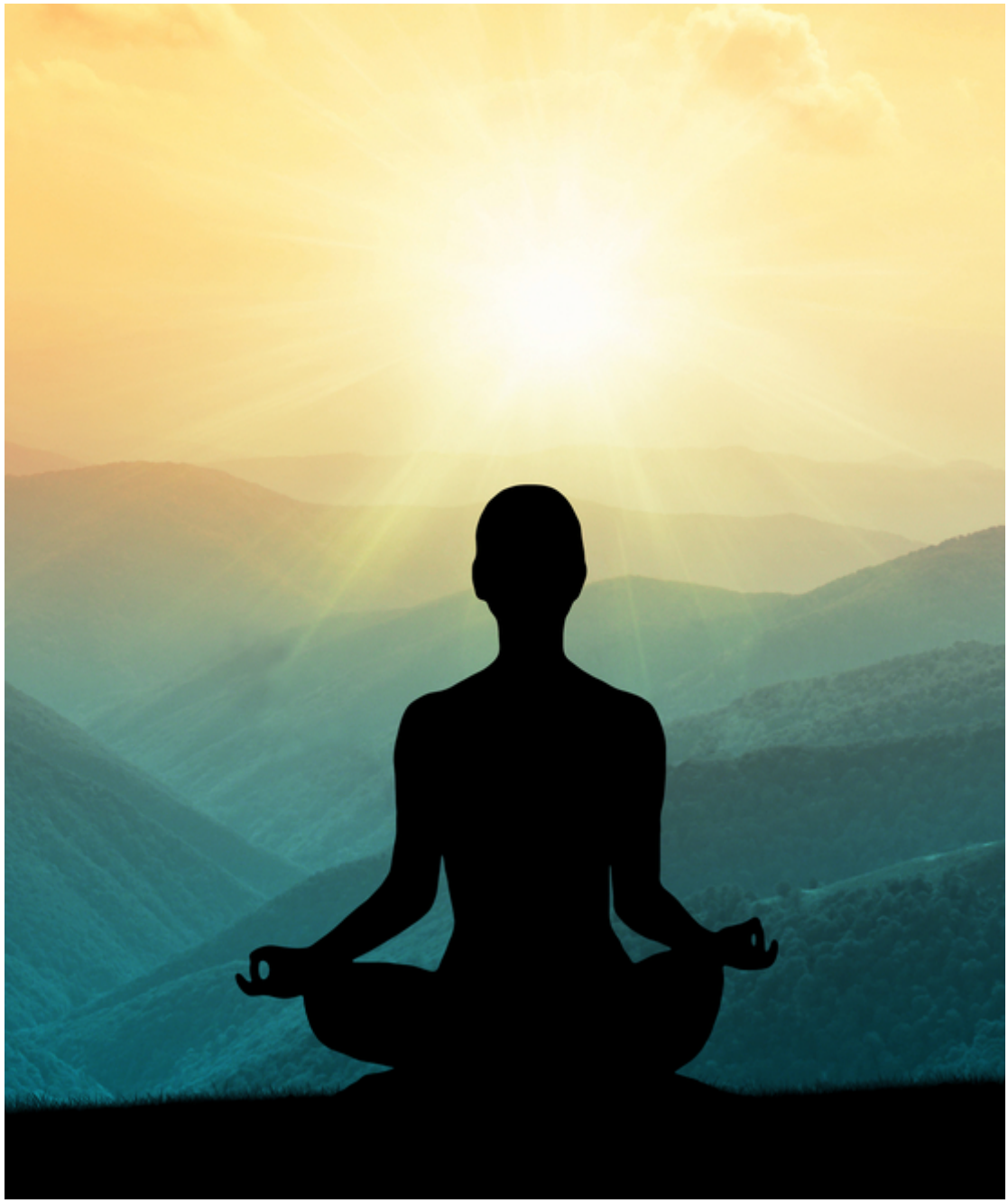
UNC FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE

NIRN NATIONAL IMPLEMENTATION RESEARCH NETWORK

Plan for Today

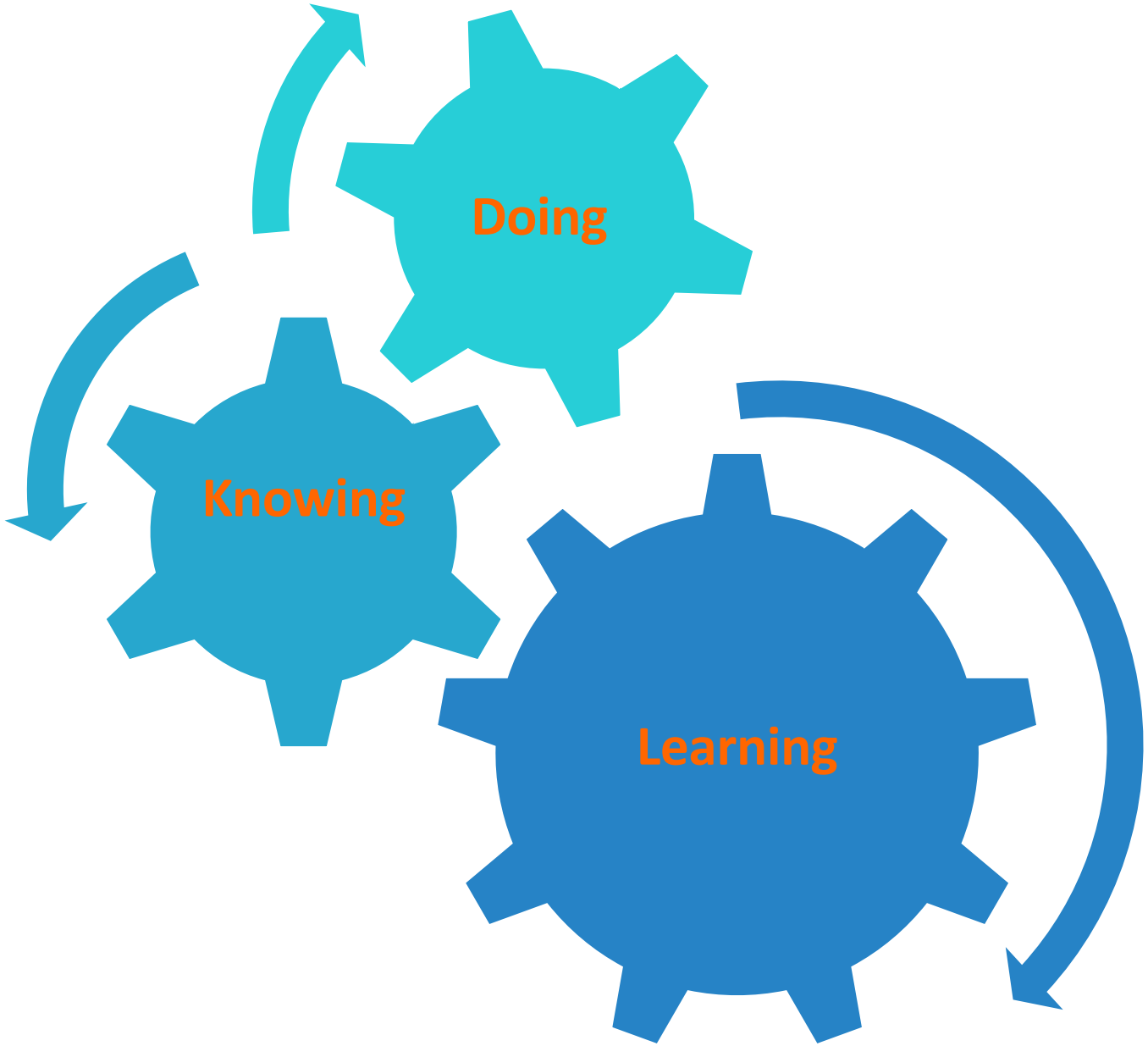
1. Simplify
2. Problematize
3. Synthesize

Leave with a Tool



Simplify: Prioritize Learning from Evidence

Learning is the gear that connects knowing with doing



What do we know about learning?

Learning – knowledge obtained from study

Program Evaluation – The use of social research methods to systematically investigate social programs

Learning ≠ **Evaluation**

Thank you, Merriam Webster online & Rossi, Lipsey, and Freeman, 2004!

What do we know about evidence?

Evidence – something that furnishes proof

Data – information in a digital form that can be transmitted or processed

Evidence ≠ **Data**

Thank you, Merriam Webster online!

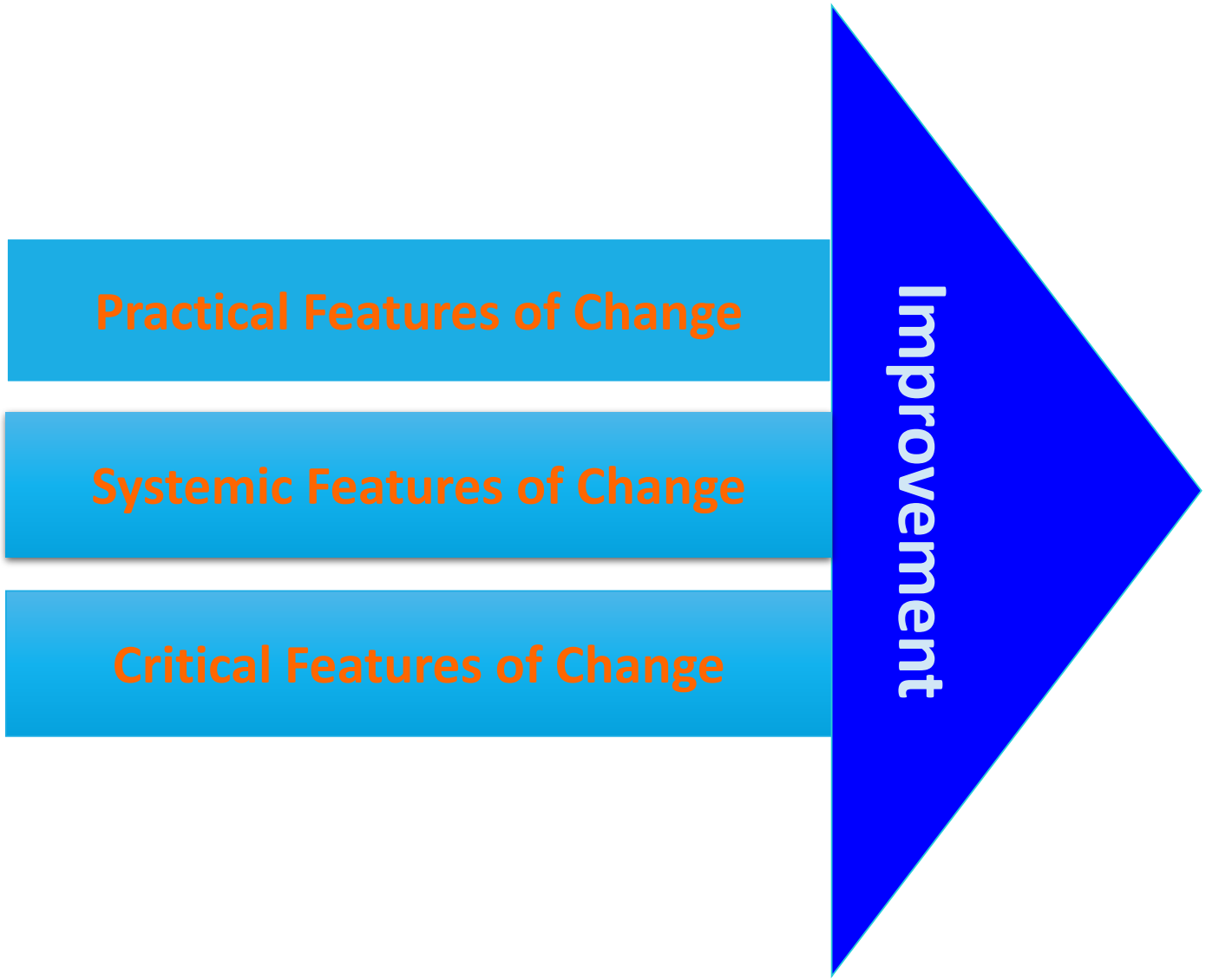
What do we know about learning from evidence?

- ✓Begins with a claim
- ✓Requires evidence to test truth of claim
- ✓Requires social processes for studying evidence
- ✓Benefits from agreements about learning and decision-making

Problematize: Producing Change in Multi-Level Systems

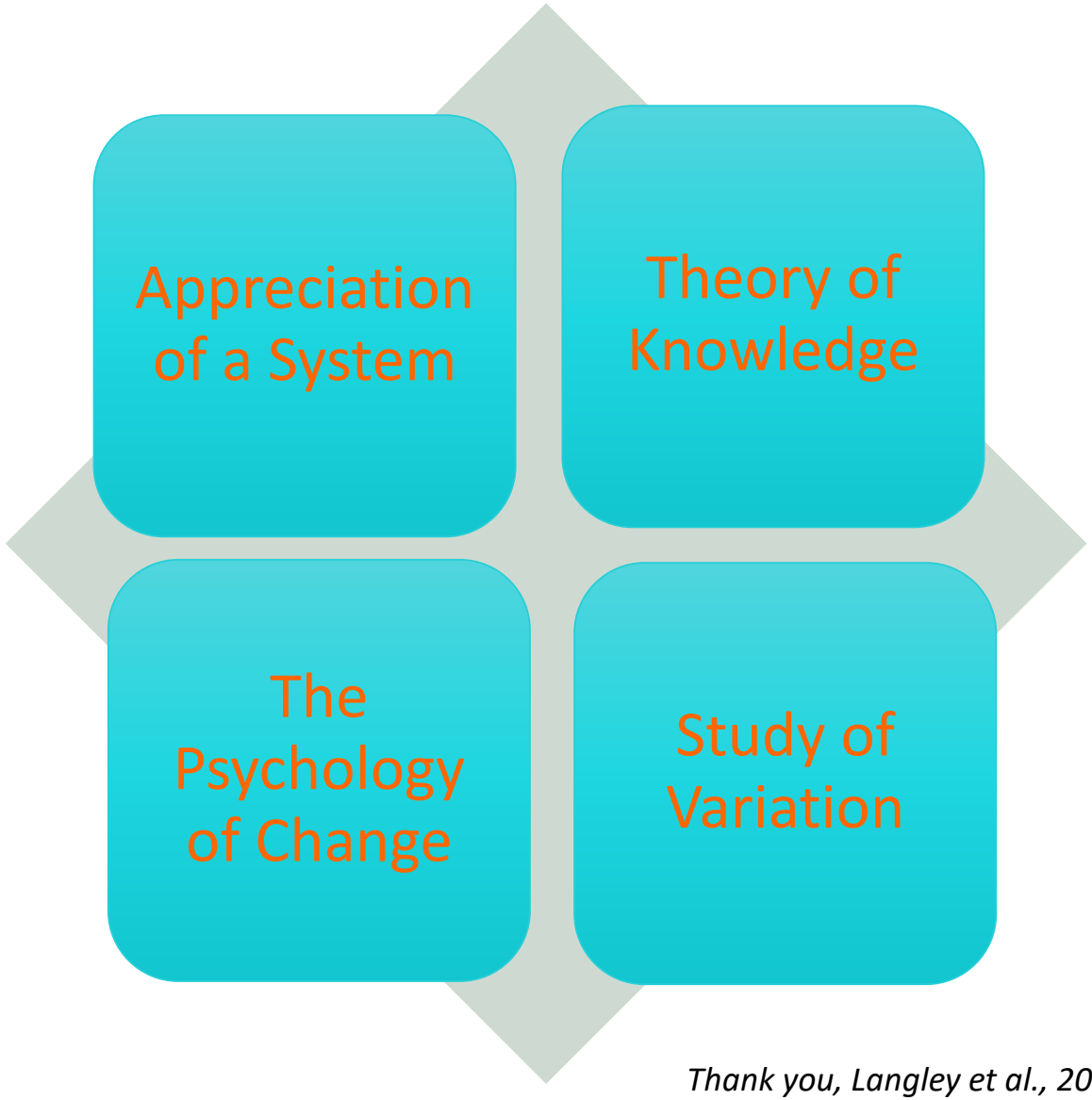
Theory of Improvement

Studying practical, systemic, and critical features of change leads to meaningful improvement of service systems



Practical Lens

The capacity for improvement comes from profound knowledge (W. Edwards Deming)



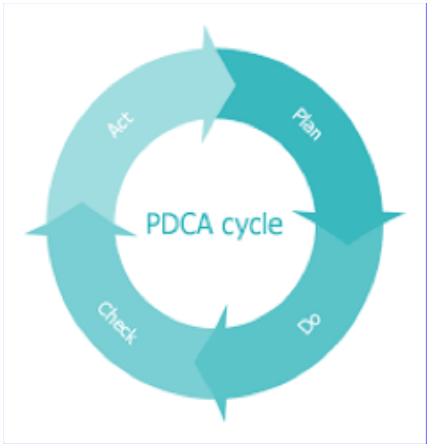
Thank you, Langley et al., 2009!

Practical Methods

Problem Statement

Root Cause Analysis

Aim Statement



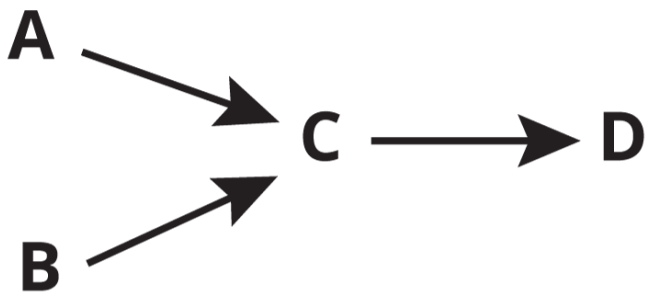
Tests of Change

Systemic Lens

Producing change in systems requires attention to inter-relationships, multiple perspectives, and boundaries

Event Oriented Thinking

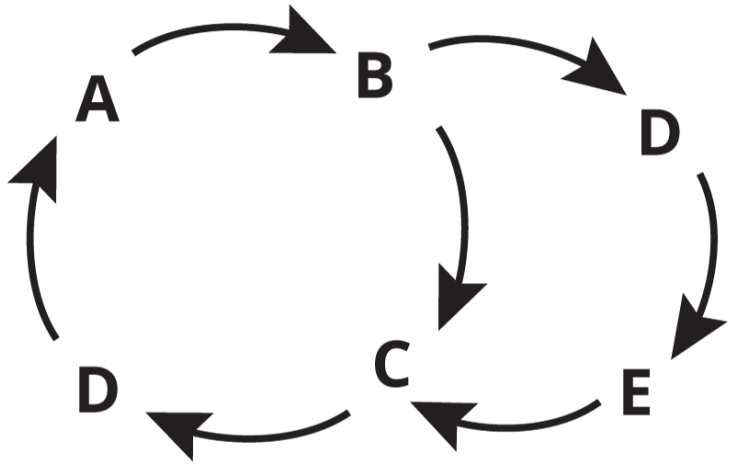
Thinks in straight lines



In event oriented thinking everything can be explained by causal chains of events. From this perspective the **root causes** are the events starting the chains of cause and effect, such as A and B.

Systems Thinking

Thinks in loop structure



In systems thinking a system's behavior emerges from the structure of its feedback loops. **Root causes** are not individual nodes. They are the forces emerging from particular feedback loops.

Created by Thwink.org

Systemic Methods

1. Describing and Analyzing Situations

   What are the inter-relationships, multiple perspectives, and boundaries that we observe?

2. Changing and Managing Situations

   How can we use insights from observation to improve or sustain a system?

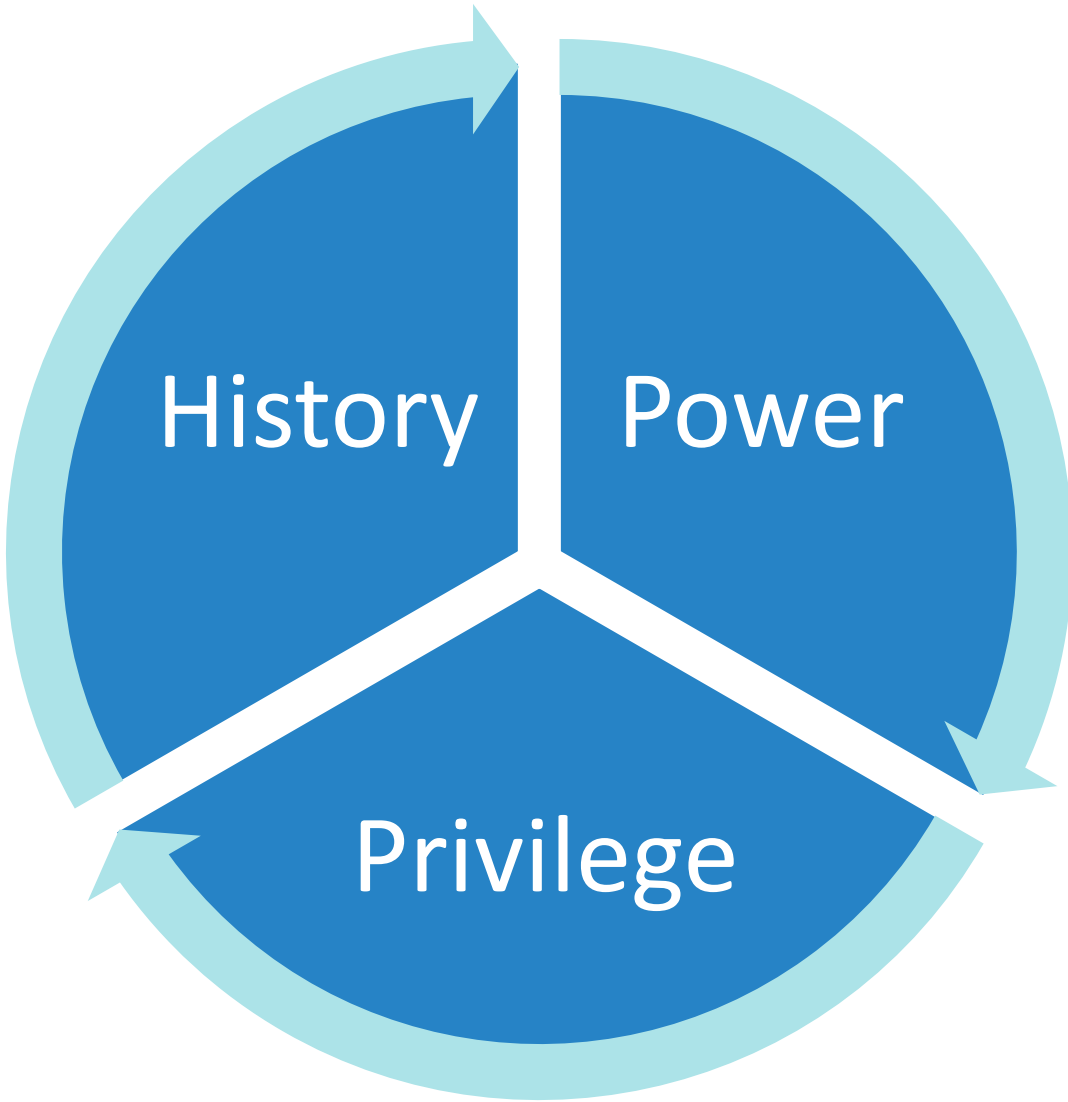
3. Learning about Situations

   What puzzles us about this situation, and how can we work with the puzzle in diverse groups to produce new understanding?

Thank you, Williams & Hummelbrunner, 2010!

Critical Lens

Power imbalances and social inequities will affect our capacity to produce improvement for all stakeholders



Critical Methods

- Who are the stakeholders for this improvement agenda – those who affect and/or are affected by the change?
- How is power to identify problems distributed across stakeholders?
- How is power to propose changes distributed across stakeholders?
- How is the power to define whether a change is an improvement distributed across stakeholders?

Synthesize: Practical, Systemic, and Critical Implications for Data Generation

What's Needed?

Design

- Claims
- Data Collection Protocol

Sense-Making

- Agreements for Learning
- Tools & Routines for Learning

Knowledge Management

- Agreements for Decision-Making
- Decision Mapping

What's Needed?

Design

- Claims
- Data Collection Protocol

Sense-Making

- Agreements for Learning
- Tools & Routines for Learning

Knowledge Management

- Agreements for Decision-Making
- Decision Mapping

Making Claims

Practical	Systemic	Critical
If we do X, then X' will happen, which will yield Y.	*To do X with fidelity, we need aligned strategies with Q, R, and S.*	*The choice to do X reflects assumptions about the causes of Y and their correlates.*
If we implement the reading intervention with fidelity, then teachers will participate in targeted professional development and their reading instruction will change, leading to higher reading performance on state tests.	To implement the reading intervention with fidelity requires that HR office releases teachers for professional development days, curriculum department aligns efforts, and principals support practice changes in classrooms.	Choosing to spend district dollars on the reading intervention and associated professional development assumes that instructional practices are the primary causes of current reading performance.

Collecting Data

Practical	Systemic	Critical
If we do X, then X' will happen, which will yield Y.	*To do X with fidelity, we need aligned strategies with Q, R, and S.*	*The choice to do X reflects assumptions about the causes of Y and correlates of Y.*
Process data on core components of X X fidelity data X' targets data Y outcome data	Stakeholder analysis of Q, R, S activities in relation with X.	Stakeholder analysis of assumptions, values, and responses to problem identification and selection of X to improve the problem.

Anticipating Data Use Downstream

Design

- Claims
- Data Collection Protocol

Sense-Making

- User Accessibility
- Presentation Formats

Knowledge Management

- Actionable Evidence
- Timed for Decision Making

A Tool for Learning from Evidence

	Practical	Systemic	Critical
Claim			
Data Protocol			
Analysis Format			
Sense-Making Audience & Process			
Decision-Making Audience & Timeline			
Record of Decision			

In summary, producing change in multi-level systems benefits from:

- Learning from evidence of the practical, systemic, and critical features of change
- Data collection that yields evidence tightly aligned with a series of change-focused claims
- Sense-making and decision-making processes for using evidence

Thank you!!!

Kirsten Kainz, Ph.D.
kirsten.kainz@unc.edu
@kirsten_kainz