

Taking research evidence from one complex system to another

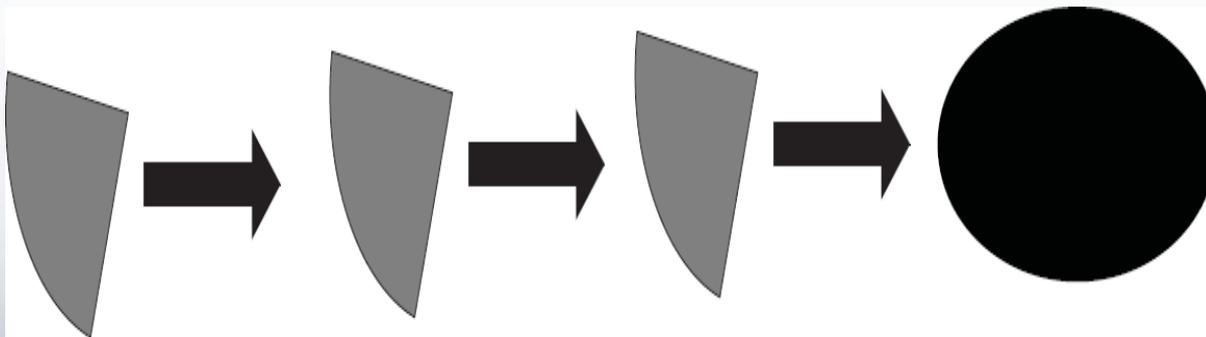
Eileen Munro
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Outline

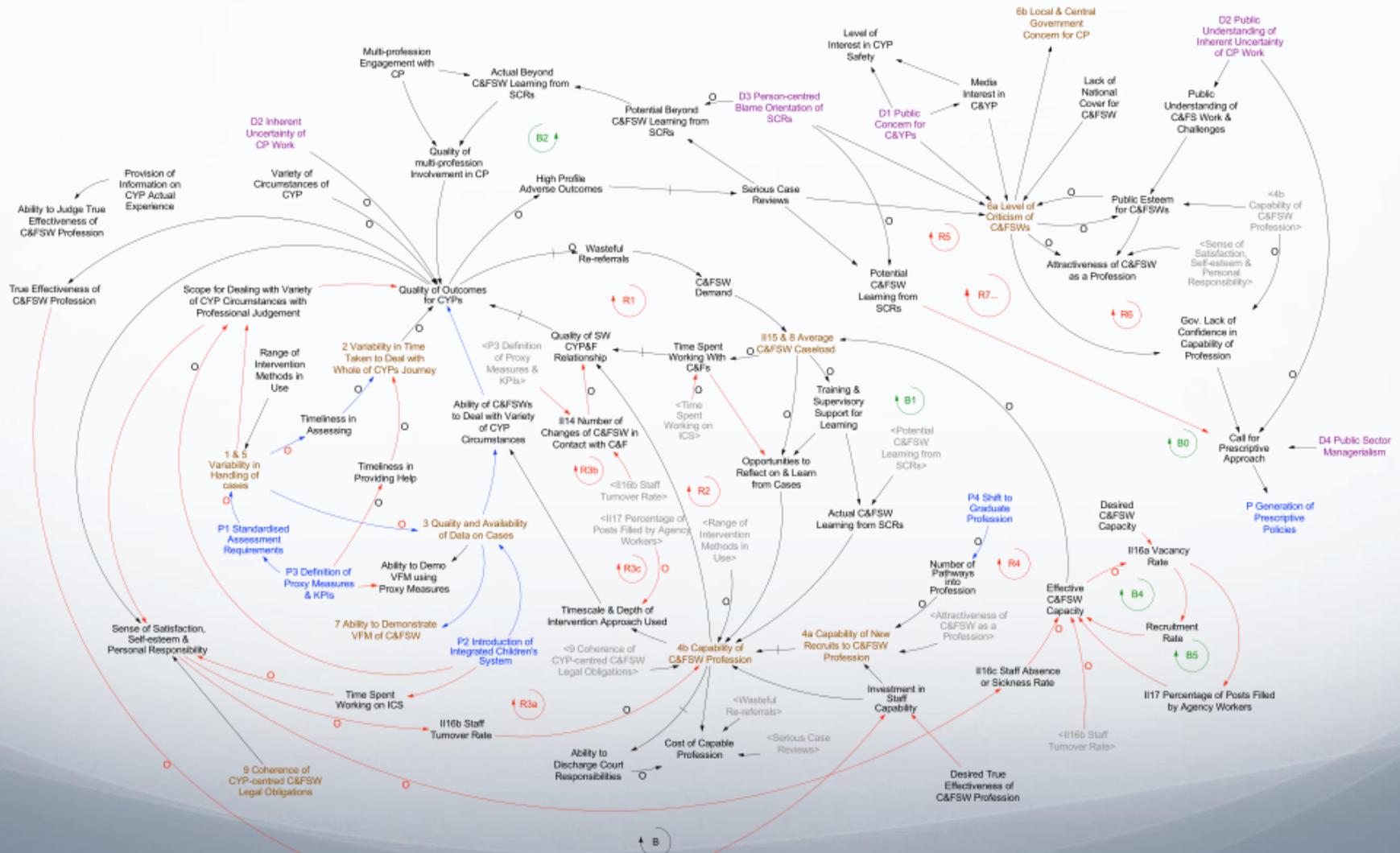
- ❖ The task: evaluating Signs of Safety in English local authorities? What general lessons can we learn?
- ❖ The problem: the complexity of behaviour in systems
- ❖ The limitations of RCTs
- ❖ Not 'what works' but more modest claims – what tends to work, how does it work, for whom and in what context?

The complexity of behaviour in systems

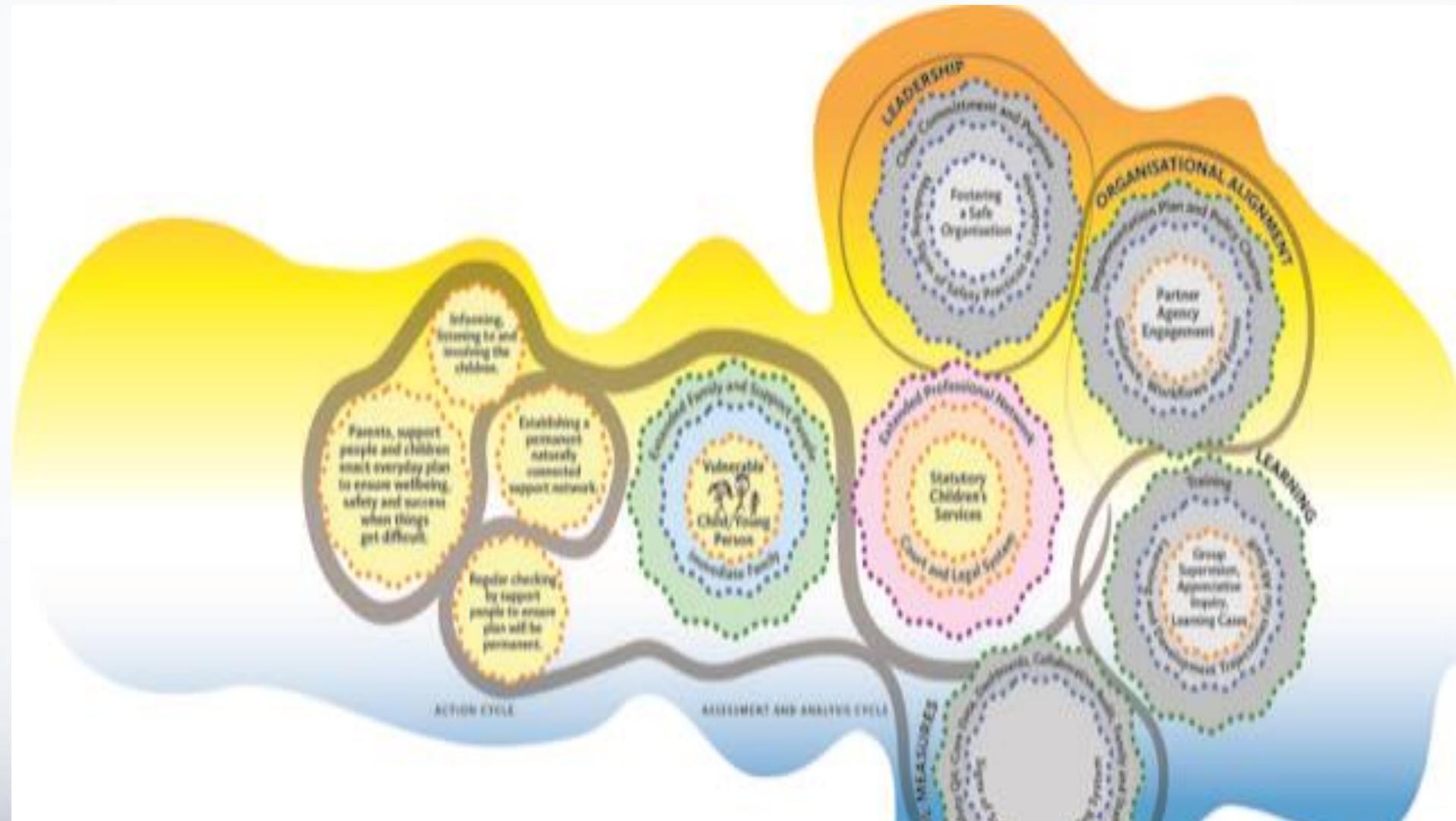
- Theories of change are often presented in simple linear way



The final causal loop diagram



From the Munro Review, DC Lane



Changing the underlying system
To prevent bad feedback loops

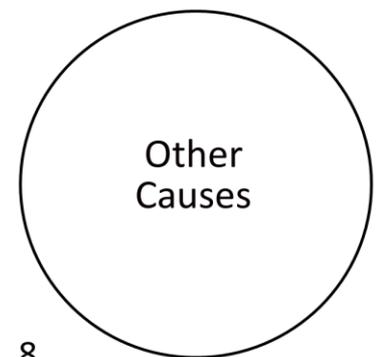
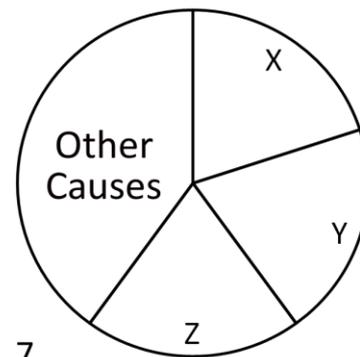
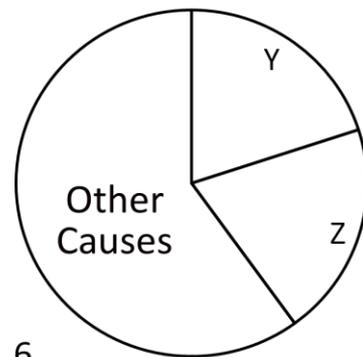
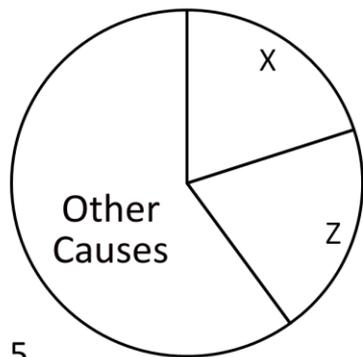
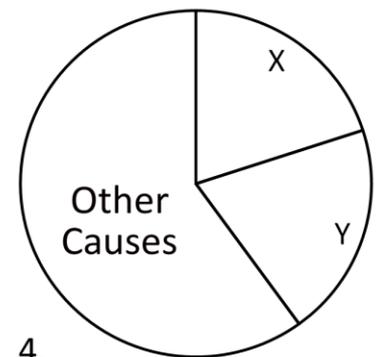
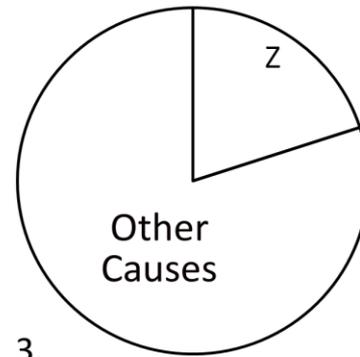
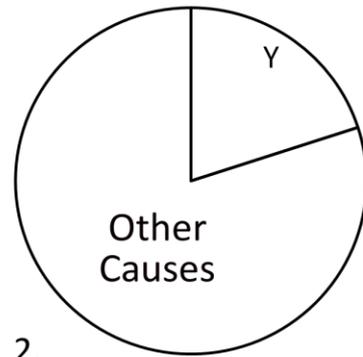
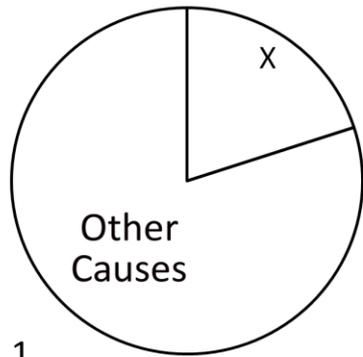
How we are trying to change the interactions in the system so that it drives quality not quantity.

- It differs from the usual top down control account.
- The wiggles in each cog are intended to convey that things change and so how they interact with other parts of the system also changes.
- A few key areas:
 - the team supervisor should cover practice details not just compliance with process,
 - the audit process should be a collaborative task seeking to understand why the worker did what they did not just a hindsight skim using recorded data only,
 - leaders need to be more involved with practice so they develop confidence in knowing good from bad,
 - we collect more feedback from families and evidence about children's safety to feed into judgements about what good practice is.

inus conditions

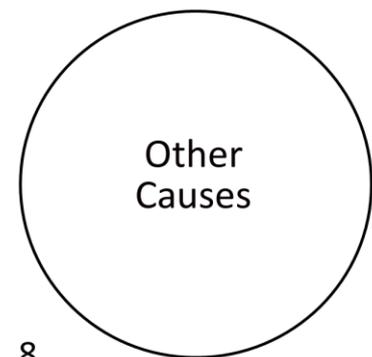
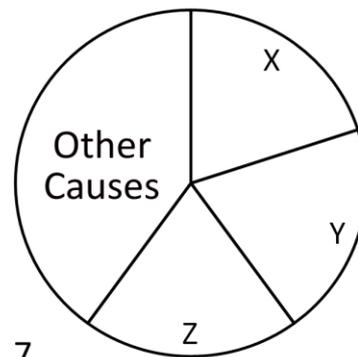
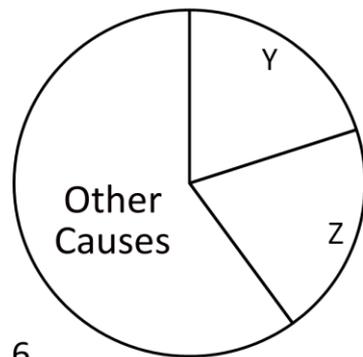
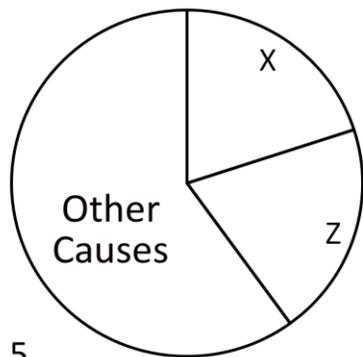
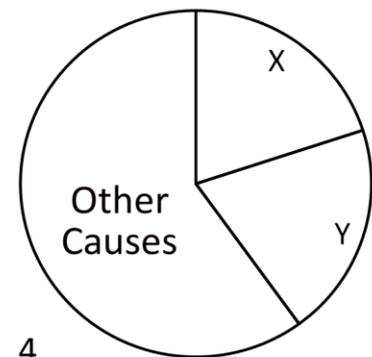
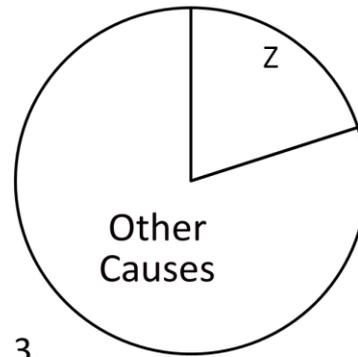
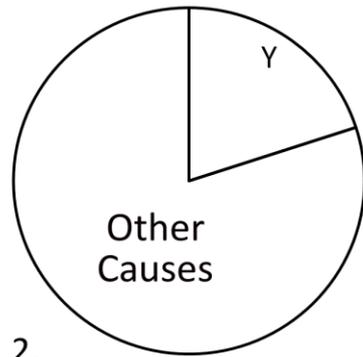
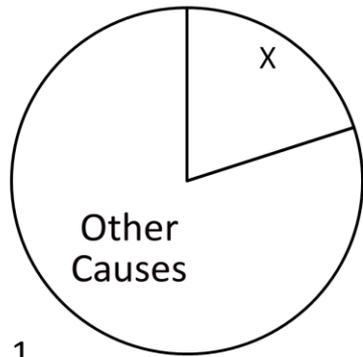
- The single factor A is neither a necessary nor a sufficient condition for Y.
- Yet it is clearly related to Y in an important way: it is an
- ***Insufficient*** but
- ***Non-redundant*** part of an
- ***Unnecessary*** but
- ***Sufficient*** condition.
- J.L. Mackie. 1974. *The Cement of the Universe: A Study of Causation*. Oxford: Clarendon Press

INUS conditions for child abuse



X: was abused; Y: substance misuse; Z: poverty

INUS conditions for treatment success



X:treatment; Y:therapist relationship; Z:time

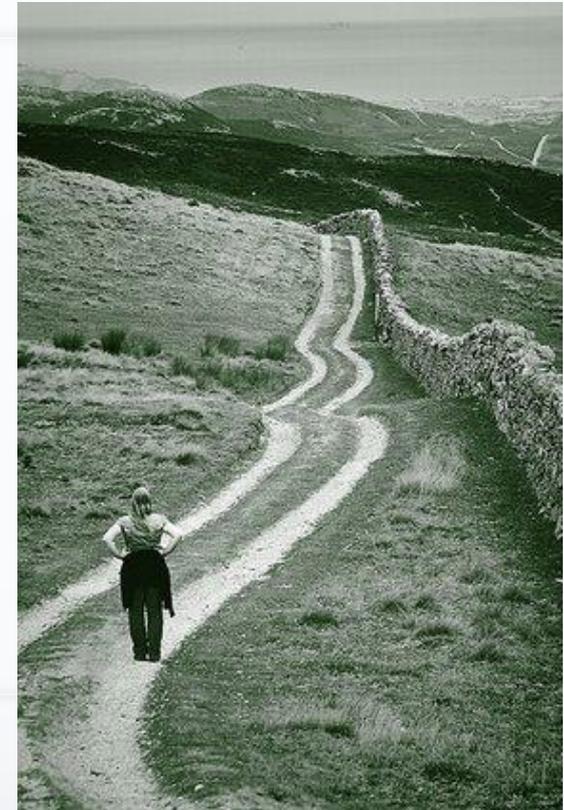
- The treatment variable T is never *enough* by itself to promote O – it is only a slice of a pie.
- It will not work without the other slices.
- And it will not work if there are any pies of sufficient strength operating to prevent O .

- Few interventions have an inbuilt tendency to produce the end result
- Mostly they just push out the boat
- To expect effectiveness, you need the whole sequence

RCTs

- We spend a lot of effort and money buying well-conducted RCTs in the belief they will be relevant as evidence to policy or practice prediction.
- The RCT structure can (in the ideal) ensure the RCT conclusion is highly credible.
- What shows that this matters to your policy or practice?
- When are we entitled to treat an RCT as evidentially relevant to our policy or practice prediction?

The long road from
it-works-somewhere to
it-will-work-for-us



Difficulty of running an RCT

- What variable do you randomise?
- How long does it take to implement an experimental approach?
- How useful is a 'black box' approach? What can a logic model cover?
- How transferable are findings?

Defining the 'it' to study

- Measuring whether service users receive the intervention being evaluated
- Enabling others to use the findings
 - external validity
 - what do they need to copy?
 - how can they achieve the same practice?

Using RCT results

- To be justified in taking a result as evidence requires a great deal of theory, local knowledge and empirical results.
- These go far beyond the trial methodology that we have mastered so well.
- Without these, taking trial results as relevant evidence elsewhere is problematic.

Alternative ways of making causal claims

- Qualitative comparative analysis (QCA)
- Dynamic pattern analysis
- May not find universal truths but probabilistic
- May differ in different contexts or at different times

Exploring HOW things work

- What mechanisms are bringing about the causal changes:
- E.g. studying the actions of leaders in motivating and supporting staff

Social systems are like mechanisms:
they afford causal processes



Context matters

- Social level differences
- Organisational level differences
- Recipient level differences

Intervention-centered approach

- *Focuses:* on characteristics of the policy
 - Does it work?
 - For whom, when, where?
 - How to implement it
 - How much does it cost?
 - What are the side effects?
- **Studies:**
 - Repeatable causal processes
- **Requires:** evidence to support generalizations or transfers of policy outcomes

Context-centered approach

- Focuses: on the arrangements in the target context
- Studies: what causal processes these afford; what changes can be made so that they afford more desirable processes
- Requires:
 - A model of what's happening in the target context
 - An understanding of how the powers and arrangements afford this
 - A plan to change what's happening, via producing either
 - A new intervention, old structure
 - New structure
 - Evidence for all of this

References

- Cartwright N. & Munro E. (2010) 'The limitations of randomized controlled trials in predicting effectiveness'. *Journal of Evaluation in Clinical Practice*, 16, 260-266
- Munro, E., Cartwright, N., Hardie, J. & Montuschi, E. (2017) *Improving child safety: deliberation, judgment and empirical research*. Durham: Centre for Humanities Engaging Science and Society