#### Mixing questions, mixing methods

Carl May



#### My research interests (1) empirical investigation

### Interaction (individualized knowledge)

Interaction processes, boundaries of relations, genetics, rheumatology, terminal care

### Innovation (intervention trajectories)

Informatics, telemedicine, shared-decision-making tools, medical devices.

## Chronicity (illness trajectories)

Back Pain, cancer, diabetes, medically unexplained symptoms, menorrhagia

#### Evidence

(generalized knowledge)

Randomized trials, pragmatic evaluations, guideline development.



## My research interests (2) explanatory models

- Understanding the dynamics of the adoption and implementation of new health technologies and organizational innovations.
  - Multiple empirical studies and systematic reviews, leading to novel theory (Normalization Process Theory).
- Understanding how innovation in healthcare technique, delivery and organization affects patient and caregiver experiences.
  - Multiple empirical studies and systematic reviews, leading to novel theory (Burden of Treatment Theory)



## MRC Framework for complex intervention evaluation

Complex interventions in health care, whether therapeutic or preventative, comprise a number of separate elements which seem essential to the proper functioning of the interventions although the 'active ingredient' of the intervention that is effective is difficult to specify. (...)



#### Modelling

Identify the components

Theory of the intervention and the underlaying Explore relevant theory mechanisms by which to ensure best choice of they will influence intervention and outcomes to provide Hypothesis and to evidence that you can predict major predict how they relate confounders and to and interact with strategic design issues each other

**Preclinical** 

Phase I

### Exploratory trial

Descibe the constant and variable components of a replicable intervention and a feasible protocol for comparing the intervention with an appropriate alternative Definitive randomised controlled trial

Compare a fully defined intervention with an appropriate alternative using a protocol that is theoretically defensible, reproducible, and adequately controlled in a study with appropriate statistical power

#### Long term implementation

Determine whether others can reliably replicate your intervention and results in uncontrolled settings over the long term

Phase II Phase III Phase IV

#### Continuum of increasing evidence



### Almost all of my work involves some sort of mixed methods

- Ethnographies in concert with randomised controlled trials
- Attribution analyses in concert with systematic reviews
- Interview studies in concert with decision tree modelling

But I was scarred by the.....

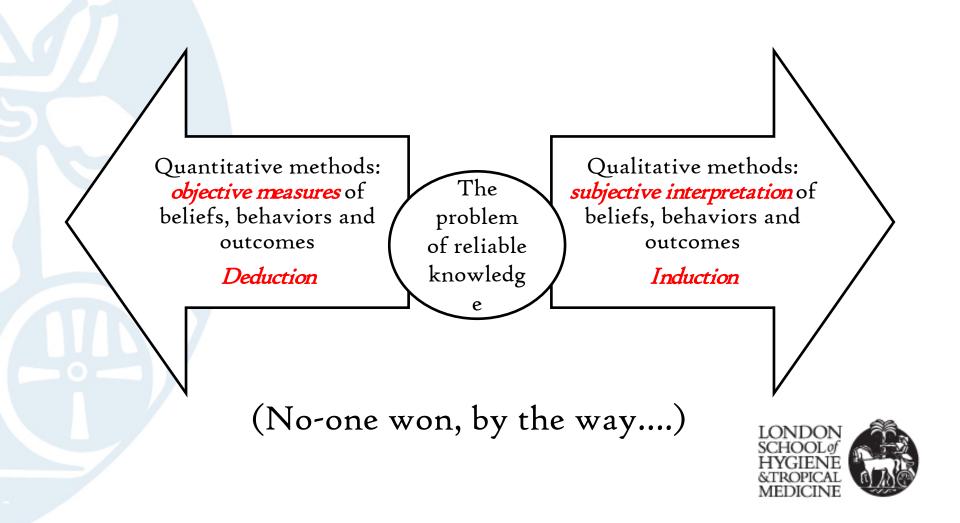


## Some methods are more mixed than others, but that's not a problem (or is it?)

- Typically, when we think about mixed methods we don't think about
  - Participant Observation + Attribution Analysis
  - Econometric Modelling + Decision Tree Modelling
  - Clinical Trials + Prospective Cohort Studies
  - Status Passage Modelling + Thematic Descriptive Analysis



## The methodology wars of the 1980s: subjectivists and objectivists in mortal combat



But here's the thing: when we mix methods, we mix many other things....

- different paradigms call for different questions,

- different questions call for different methods,

- different methods call for different answers.



So, we can either live in a world of uneasy epistemological compromise (and, really, who doesn't?)

Or....we can attack a problem from many angles, with many methods, until we have a set of solutions that can be worked together.

But to get there, we need to....



Use theory as a bridge between methods

Qualitative investigation:

Identifies empirical regularities that warrant explanation





Quantitative investigation:

Tests theories, offers generalizable explanations



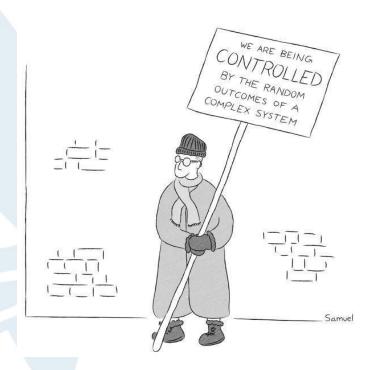
Theory building:

Theory is the bridge between paradigms, methods, and questions



If we treat mixed methods only as a methodological problem, then we leave a half of the answers to our questions behind.





# Thank you!

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