Mixing questions, mixing methods

Carl May
My research interests (1) empirical *investigation*

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Chronicity</th>
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<tbody>
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<td><em>(individualized knowledge)</em></td>
<td><em>(illness trajectories)</em></td>
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<tr>
<td>Interaction processes, boundaries of relations, genetics, rheumatology, terminal care</td>
<td>Back Pain, cancer, diabetes, medically unexplained symptoms, menorrhagia</td>
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<th>Innovation</th>
<th>Evidence</th>
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<td><em>(intervention trajectories)</em></td>
<td><em>(generalized knowledge)</em></td>
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<tr>
<td>Informatics, telemedicine, shared-decision-making tools, medical devices.</td>
<td>Randomized trials, pragmatic evaluations, guideline development.</td>
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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. (...
Theory
Explore relevant theory to ensure best choice of intervention and hypothesis and to predict major confounders and strategic design issues.

Preclinical

Modelling
Identify the components of the intervention and the underlying mechanisms by which they will influence outcomes to provide evidence that you can predict how they relate to and interact with each other.

Phase I

Exploratory trial
Describe the constant and variable components of a replicable intervention and a feasible protocol for comparing the intervention with an appropriate alternative.

Phase II

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.

Phase III

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

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

Quantitative methods: objective measures of beliefs, behaviors and outcomes

Deduction

Qualitative methods: subjective interpretation of beliefs, behaviors and outcomes

Induction

The problem of reliable knowledge

(No-one won, by the way....)
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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