Making the case for realist reviews

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Structure of this presentation

• Objectives
• An overview of realist review as an approach
• The underpinning assumptions of realist reviews
• Examples of when they might they be useful
• Over to Maura for details from our current review
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Objectives

By the end of this presentation hopefully you will have an understanding of:

• what a realist review is (and is not)
• the underpinning assumptions of realist reviews
• when a realist review might be useful
• When ‘thinking like a realist’ may be helpful
What is realist review?

- Realist review / synthesis = secondary research (Realist evaluation = primary research)

- Realist reviews:
  - have more of an explanatory rather than judgmental focus.
  - are based on a realist philosophy of science (ontology).
  - look for mechanisms and middle-range theories.
  - test and build these theories.
  - are iterative.
  - look to answer the ‘How?’, ‘Why?’, ‘For whom?’, ‘To what extent?’ and ‘In what circumstances?’

- Helpful in making sense of interventions and programmes that are complex and have outcomes that are context dependent.
Programmes or interventions in health are complex

- Multiple components
- Emergence
- Multiple outcomes
- Non-linear
- Long implementation chains
- Interacting components
- Context sensitive outcomes

http://crucesydesplazamientos.files.wordpress.com/2008/05/liverpoolmap.jpg
A simplified diagram of a ‘complex’ intervention

E.g. a multi-disciplinary team working in the community
REALISM

Context + Mechanism = Outcome

A way of thinking about:

• how the world is constituted
• causation
• theories
• data
• why lessons are transferable
Generative causation

• Causation

  – Mechanisms may be defined as:
    • “…underlying entities, processes, or structures which operate in particular contexts to generate outcomes of interest.”*
    • The way in which a programme’s resources or opportunities interact with the reasoning of individuals and lead to changes in behaviour.

  – Mechanisms:
    • Are usually hidden.
    • Are sensitive to variations in context.
    • Generate outcomes.

Clarifying concepts ...

Programme theory - an abstracted description and/or diagram that lays out what a programme (or family of programmes or intervention) comprises and how it is expected to work

Diagrammatic representation of a well refined realist programme theory
CMO and middle-range theory

• Hence…

Intervention

Context influences which mechanisms ‘fire’.

Context + Mechanism = Outcome

- Mechanisms are one of the building blocks of middle-range theories.
- Middle-range theories explain how and why the context limits and influences mechanisms.
Putting it all together

Intervention

Context

Mechanism

Outcome
Realist review: A type of theory driven systematic review

Start
Review questions

General design
Designing the review

Refined programme theory

Search for evidence
Develop, pilot and refine search
Screening

Iteratively develop and provide recommendations

Synthesising the evidence (and drawing conclusions)

Extracting and organising data

Article selection
Relevance
Rigour


Training materials:
www.ramesesproject.org

* if necessary
Benefits of thinking like a realist

Encourages you to:

• question the assumptions behind any intervention or programme (i.e. what is the programme theory?)

• ask why something ‘works’? (i.e. what is causing this to work?)

• consider when and for whom it might ‘work’?
Example 1 of the benefit of thinking like a realist

https://www.youtube.com/watch?v=JCc20Bifl5k&t=5s
Example 1 of the benefit of thinking like a realist

Context–mechanism–outcome configuration for problem identified.

Stocism → Denial

Problematic experience → Social network

Educational status

General and personal health literacy → Evaluation of evolving experiences

General and personal health literacy

Problem identified

Single border node = context
Double border node = mechanism
Square node = outcome

John A Ford et al. BMJ Open 2016;6:e010652
Example 2 of the benefit of thinking like a realist

Identification

- Problem misidentification
- Criminalisation
- Compensating (displaced) behaviour

Compulsion

- Lack of public support
- Lobby group opposition
- Obfuscating the new regulations

Enforcement

- Low perceived threat of enforcement/punishment
- Insufficient enforcement resources

Figure 1 Simplified diagrammatic representation of potential threats to legislation (our initial framework). Threats in bold font are the ones which were most prominent and relevant in our test case study of legislation banning smoking in vehicles carrying children. This figure has been highly simplified and for illustrative purposes has displayed the potential threats in a linear sequence.
Table 1: The key questions that need to be addressed in the identified threats to legislation banning smoking in vehicles carrying children

1. PROBLEM MISIDENTIFICATION
   Is the severity of the problem sufficient to justify a law?
   a. Is it possible to show that exposure to second-hand smoke in cars leads to ill-health?
   b. What toxicity levels are encountered in a car when cigarettes are smoked?
   c. Does ventilation make a difference?
   d. Are the toxicity levels comparable to other risky environments in which smoking bans already operate?
   e. How does the potential harm compare to formally approved air quality standards?

2. LACK OF PUBLIC SUPPORT
   Is there likely to be public support for such a law?
   a. What is the overall magnitude of support for such a law?
   b. What are the levels of support amongst smokers?
   c. What is the motivation behind public support?
   d. Does endorsement depend on the extent and success of previous smoking bans in work and public places?

3. LOBBY GROUP OPPOSITION
   Is there likely to be effective pressure group opposition?
   a. Has the Tobacco lobby opposed this particular ban?
   b. Are they likely to do so in future?

4. ENFORCEMENT
   Is the law enforceable?
   a. Given that the potential infraction is fleeting and localised will smokers fail to comply assuming there is little risk of being caught?
   b. Given limited resources, the difficulties of detection and the fact that the law addresses a public health issue will the police act significantly on enforcement?
   c. What other measure need to be incorporated to encourage compliance and enhance enforcement?
Summary

• Realist reviews enable reviewers to use a broad range of different data sources (e.g. qualitative and quantitative) to make sense of context sensitive complex interventions.

• They are based on a realist understanding of how the world works (realist philosophy of science).

• It is this view of how the world works that enables us to make sense of context sensitive complex interventions.

• Understanding this realist philosophy of science is the first step in understanding realist reviews.
Thank you for listening and over to Maura

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