Theory-based Approaches for Practical Evaluation

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What are Theory-based Approaches?

• A way of structuring analysis (not a specific method)
• Explicit theory(ies) of change (logic model / results chain)
• Set of assumptions, risks and external factors
• Tested by empirical evidence
• Not so different from what you likely do now!
What Does a Theory-based Approach Look Like?

- Use a results chain with a theory or theories of change
- Identify a few critical assumptions, external factors and risks
- Assess whether the theory of change makes sense (draw on past related experiences)
- Confirm that the planned activities were carried out, resulting in planned outputs
- Confirm via monitoring data that (some) immediate and intermediate outcomes occurred
- Conduct original data collection to test the theory of change – is it working (i.e. is there a significant contribution to outcomes?) or are other influencing factors playing a larger role?
- Conclude on the extent to which the program activities are most likely making a difference (and with whom to what extent and why?)

(derived from Mayne 2011)
Use in Evaluation

• Much discussed – limited real use
• Challenges
  – ‘Loose’ results logic
  – Methods driven ideas of rigour
  – Fear of ‘exposure’?
The Cause and Effect Conundrum

• We want to know whether we make a difference (i.e. cause and effect)
  BUT

• Classic method-oriented approaches work less and less well* (complicated and complex environments, limited evaluative resources)

*see Pedersen and Rieper *Is Realist Evaluation a Realistic Approach for Complex Reforms?* **Evaluation** Vol 14(3) 2008
Realist Synthesis (Evaluation)

Source: Pawson, R. *Evidence-based Policy A Realist Perspective* Sage Publications 2006. Figure 2.1 page 22
### An Initial ‘Theory Map’ of the Public Disclosure of Health Care Information

#### Theory one: Classification
The quality of particular aspects of health care can be monitored and measured to provide valid and reliable rankings of comparative performance.

#### Theory two: Disclosure
Information on the comparative performance and the identity of the respective parties is disclosed and publicised through public media.

#### Theory three: Sanction
Members of the broader health community act on the disclosure in order to influence subsequent performance of named parties.

#### Theory four: Response
Parties subject to the public notification measures will react to the sanctions in order to maintain position or improve performance.

#### Theory five: Ratings Resistance
The authority of the performance measures can be undermined by the agents of those measured claiming that the data are invalid and unreliable.

#### Theory six: Rival Framing
The ‘expert framing’ assumed in the performance measure is distorted through the application of the media’s ‘dominant frames’.

#### Theory three a, b, c, d: Alternative sanctions
The sanction mounted on the basis of differential performance operate through:
- a) ‘regulation’
- b) ‘consumer choice’
- c) ‘purchasing decisions’
- d) ‘shaming’

#### Theory seven: Measure manipulation
Response may be made to the measurement rather than its consequences with attempts to outmanoeuvre the monitoring apparatus.

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The Theories ‘Thicket’

• Need to understand the underlying theory or theories in an intervention
  BUT
• Theories can be multiple and sometimes contradictory – at minimum they are messy
• Results chains can provide a map
An Initial ‘Theory Map’ of the Public Disclosure of Health Care Information

Results Chain

- **Final outcomes (impacts)**
  - Better health care provided

- **Intermediate outcomes**
  - Parties subject to the public notification measures will react to the sanctions in order to maintain position or improve performance
  - Members of the broader health community act on the disclosure in order to influence subsequent performance of named parties

- **Immediate outcomes**
  - Information on the comparative performance and the identity of the respective parties is disclosed and publicised through public media

- **Outputs**
  - Valid and reliable rankings of comparative performance are developed

- **Activities**
  - The quality of particular aspects of health care is monitored and measured

Assumptions and Risks

- **Assumptions:** Better health care across the board can be improved.
  - **Risks:** Improvements in one location reduce health care elsewhere.

- **Assumptions:** Ratings are accepted as good measures of performance. Parties named work to improve performance.
  - **Risks:** Performance ratings are not accepted as valid and reliable; Parties work to improve the ratings not actual performance.

- **Assumptions:** Intended target audiences act on the information creating peer and public pressure.
  - **Risks:** Apathy; some target audiences not seen as credible

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- **Assumptions:** Intended target audiences act on the information creating peer and public pressure.
  - **Risks:** Apathy; some target audiences not seen as credible

- **Assumptions:** Intended target audience received the information and messages as intended.
  - **Risks:** Intended reach not met; media distort the messages.

- **Assumptions:** Valid and reliable rankings can be developed.
  - **Risks:** Monitoring across a variety of sites is not comparable. Measures of key health care aspects are not adequately reliable and valid.

Source: John Mayne
mimeo April 30, 2009

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What About Logic Models?

• Logic models contain theories of change
• Most current logic models need adjustment to be rendered into theories of change for testing
## Intermediate Outcomes

**Canadian sector ‘x’ is well-informed of potential barrier issues and trends in international markets**

**Science-based evidence supports sector ‘x’ market outreach**

**Key influencers have the information they need regarding the (barrier related) credentials of Canada’s sector ‘x’ and its products**

**Canadian sector ‘x’ products are considered to be an appropriate (re: potential barrier) responsible & preferred choice internationally**

## End Outcome

**Improved acceptance for Canadian sector ‘x’ products in international markets**
Summary Theory of Implementation and Change

Implementation ‘Model’
Governance, priority setting, program delivery arrangements

Change ‘Model’
Target group reach and chain of results

Contextual Factors
**Results Chain**

1. Government Department (funding agency) determines need.

2. Government Department (funding agency) invests in program(s).

3. The appropriate governance arrangements and (critical mass of) co-delivery agents engage with Government Department and other ‘partners’.

4. Governance structures are formed and actively managed (Advisory Committees and contracted deliverers).

5. Priorities are (clearly) set and projects are solicited (appropriately).

6. Appropriate industry sector participation / engagement in project selection.

7. Appropriately targeted and realistic proposals supported (i.e. they respond to market realities).

8. Projects are conducted as anticipated (appropriately addressing needs). Sector ‘x’ industry works with policy makers to encourage use of scientific evidence in decisions.

9. Appropriate target groups (e.g. market acceptance and access community) are sufficiently ‘reached’ / engaged by market development initiatives / projects.

10. Groups reached by initiatives show positive reactions, capacity (knowledge, abilities, commitments, aspirations) - willingness and commitment to using scientific evidence in decisions, key influencers have info they need re: sector ‘x’ and products. 

   Canadian sector ‘x’ products are considered to be appropriate (vis a vis potential barrier) responsible and preferred choice internationally.

11. Incremental change to policies and practices related to the use of sector ‘x’ products (empirically focussed, expanded and improved) - reduced access issues 

   Improved acceptance for Canadian sector ‘x’ products in international markets. 

   Market access issues are reduced and avoided in international target markets.

12. Improved ‘acceptance’ of Canadian sector ‘x’ products. Increased sales of Canadian products.

13. Net benefit to Canadian sector ‘x’ companies.


**Assumptions / External Factors**

A. Appropriate information, understanding and analysis of problems convert into appropriate investment

B. Sufficient, appropriate and consistent funding and program assistance

C. Agendas remain consistent with key co-deliverers

D. Support climate allows for clear governance

E. Economic, management and political circumstances allow for appropriate sector engagement

F. Key sector proponents have the capacity and commitment to apply for targeted assistance

G. Proponents have ‘will’ and ability to carry through on commitments

H. Target communities attracted to participate / engage in initiatives (for the right reasons)

I. Messages / information / supports are ‘attractive’ and compelling to participants

J. Groups have broad economic, policy and management support and conditions

K. Canadian sector ‘x’ products would not be sold elsewhere

L. Canadian sector ‘x’ products cost of goods sold allow for a net profit

M. Net benefits to Canadian sector ‘x’ companies create net benefits for Canadian communities

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**Implementation Theory**

**Change Theory**

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Summary Theory of Implementation and Change

Implementation ‘Model’
Agency funds delivery via sector Not-For-Profit, with oversight by representative advisory board

Contextual Factors

Change ‘Model’
Assistance will reach target groups who will appropriately use funding as incentive to change leading to benefits to Canada
Theory of Deterrence

- License Revocation
- License Suspension
- Criminal Penalty
- Civil Penalty
- Warning Letter
- Persuasion

Source: Ayres and Braithwaite (1992)
Implementation
‘Model’
Delivery by Agency, dependence on some other Agencies and levels of government for surveillance, inspection, investigation and enforcement – appeals through separate tribunal

Change
‘Model’
Administrative Monetary Penalties reach target (violating) groups who are then deterred...serves as an example to deter others – making area safer

Contextual Factors
Evaluation Use: Observations to Date

- Implementation and Change Theory ‘dialogue’ is very useful
- ‘Honed’ evidence
- Rigorous thinking before rigorous methods
- No ‘surprises’ when theories (and assumptions, factors, risks) laid out early and often
- Can actually increase engagement of stakeholders
- Cost-effective and timely in early applications
Speculations

• Generative learning approach will allow for better community learning re: what works for whom in what conditions and why
• Addresses contribution where it’s too complex for attribution
• Stand alone or front end to bigger studies?
• Can this help enhance the relevance of evaluations and the evaluation function?
Evaluation of Administrative Monetary Penalties – Realist Approach

Evaluation Directorate

February, 2012
What are administrative monetary penalties (or AMPs) ?

- Essentially fines imposed on regulated parties
- Fill a deterrence gap between warnings and prosecution (see compliance pyramid)
- Designed and intended to be cheaper, quicker and easier than prosecutions
- Inspectors identify possible violations of regulations and acts, and send file to investigators.
- Investigators may issue an AMP with warnings, or with penalties between $500 and $15,000
EVALUATION CHALLENGE

• CFIA management requested cost-benefit and effectiveness study. Context included whether use of AMPs should be extended to other acts (currently *Health of Animals* and *Plant Protection Acts*).

• Insufficient data
  - Compliance rates are a common CFIA performance measure, but attribution to inspection and investigation is usually difficult because of the complex environment with multiple players.
REALIST SOLUTION

- PMN Networks Inc. (Steve Montague) proposed a realist evaluation approach to identify where AMPs were working for whom, in what conditions, and why.

- No attempt at designing a research study to confirm attribution, e.g., quasi-experimental design (Impossible to fine some while not fining others for same infractions).

- Questions designed to identify the conditions where AMPs were working and where they weren’t, i.e., the context.

- Extensive interviews, file and document review and database analysis.
RESULT

• Detailed program description outlining program myths, assumptions and the variety of perspectives on how AMPs were working and supposed to work

• Quantitative evidence also used to identify conditions
  • E.g., the roughly 400 cases of appealed AMPs (out of over 3,000 in 10 years) supported list of situations where they don’t work well, such as unclear regulatory language, complex accountabilities and marginal industry players

• Approval of evaluation report by CFIA Senior Management
  • Report’s list of prime conditions for AMPs noted as very helpful to policy and operational management