A REALIST APPROACH TO PROGRAMS AND EVALUATION

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Life is not a textbook; there are good reasons why population and public health practitioners become frustrated with evaluation and the evidence-based rhetoric.

1. Justify uneasiness with a rational planning and evaluation model for population health interventions
2. Develop a systemic and realist understanding of population health interventions
3. Develop a systemic and realist understanding of population health intervention evaluation
Plan

- Day 1: A systemic and realist approach to population health interventions
- Day 2: A systemic and realist approach to population health intervention evaluation
Plan: Day 1

1. Contrasting two conceptions of population health interventions

2. Population health interventions as systems of action

3. Modeling a program’s socio-technical network
Day 1
Part 1:
Contrasting two conceptions of population health interventions
The institutional/structural approach to programming

- Programs as institutional responses to problems in society
- Programs as technical solutions to problems
- Programs as expert systems
- Programs as sequences of pre-defined operations to produce valued outcome
Structure of Institutional Programs

Local Conditions

Problematic situation

Initial conditions

Resulting conditions

Program

Objective

Resources

Services/activities

Potvin, Haddad, Frohlich, 2001
Evaluation of Institutional Programs

Local Conditions

Problematic situation

Initial conditions

Resulting conditions

Program

Objectives

Resources

Services/activities

Responsiveness

Relevance

Coherence

Achievements

Results

Productivity
A Stage Model of Program Development

Planning
- Needs analysis
- Partnership development
- Elaboration of activities
- Search for funding
- Feasibility studies
- Define objectives
- Define theory of treatment
- Estimated resources

Sponsors
- Activities for targeted clienteles
- Client services
- Personal monitoring and supervision
- Resources monitoring

Implementation

Routines
- Combining activities and services
- Securing resources
- Enshrine activities in rules and procedures
- Adaption of activities to environment

Sustainability

Evaluation Activities
Programs as action systems

- In contrast to expert systems or social movements
- In situations of uncertainty
- In situations where socio-technical innovation is a necessity
- Programs are socio-technical networks with their own characteristics, which are created and develop by means of identifiable processes to attain specific ends
- The program system is the fundamental component of the program space
## Two approaches to program

<table>
<thead>
<tr>
<th><strong>Systemic</strong></th>
<th><strong>Institutional</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Program as a system of action</td>
<td>Program as expert system – logic model</td>
</tr>
<tr>
<td>Adjustments – Transformation of form in space/time</td>
<td>Definite form, fixed (standard) in space and time</td>
</tr>
<tr>
<td>S-T Process: Structure – Process- Purpose in interaction with Context and Time</td>
<td>Technical process Objectives-» Actions -»Results (without actors)</td>
</tr>
<tr>
<td>Reflexive</td>
<td>Non reflexive</td>
</tr>
</tbody>
</table>

- **Potvin – Winnipeg Sept. 2010**
A program is a form of organised action in modern States

The program is a social system that evolves and transforms itself in space and time
Day 1
Part 2:
Population health interventions (programs) as systems of action
Four notions to appraise the reality of programs

- **COMPLEXITY**: Systems
- **CONTEXTUALISM**: Realist ontology
- **PROGRAM STRUCTURE**: Socio-technical networks
- **DYNAMISM**: Reflexivity
Complexity

- The object is composed of active processes of organizing interactions
- The object cannot be reduced to its units without losing its intelligibility
- It is impossible to exactly reproduce the object since it is made up of self-organizing processes and is context dependent
- Systemic reasoning and modelling to grasp the object's intelligibility
Systems as complex objects

Environment

Evolution

Structure

Activities

Finalities

Le Maigre (1990), p.58.
Program Space: A system

Context → Time → Form
Program Space : A system

CONTEXT

Time

Form
Contextualism

- Three layers of context:
  - Shaping of health and disease
  - Intervention to alter conditions that shape health
  - Evaluation to assess/understand interventions

- Effective principles of interventions come from the interactions with contextual conditions

- Three enduring dimensions of context
  - Structure/Agency dualism – changing one is changing the other
  - Power relationships – position in the structure
  - Emplacement – culture of place emerging from the routinised practices of engaged participants in social processes

Poland, Frohlich & Cargo, 2008
Critical realism as program ontology: Three layers of reality

1. Mechanism
   - Exercises causal power
   - Not directly observable
   - Always at work unless otherwise « neutralised » through other mechanisms
   - Always interacting with other mechanisms

2. Events
   - Product of the interaction of multiple mechanisms
   - Directly observable from a situated perspective
   - A way of « boxing » the fluidity of reality

3. Representations / models
   - Cumulated knowledge that provides a perspective
   - Altered through human interactions with other mechanisms creating events

Sayer, 2000
Programs as « objects »

Objective
Knowledgeable subject

Reality
Programs as «events»

Experience of Subjects /Actors  Events  Structure/mechanisms

Knowledgeable subject/actor  Model  Problem

Program  Structure

object  object  object  object  object  object  object

Mechanism  Mechanism  Mechanism

Experience of Subjects /Actors
Effective principles in programs

C – M – O

- Program context is always characterized by simultaneously operating mechanisms
- Programs create events in attempts to trigger or neutralize mechanisms
- Outcomes are models of observable events produced by the interaction of program mechanisms with mechanisms from the context
- Human in programs can always exercise agency

Pawson & Tilley, 1997
Program Space: A system

Context → Time → FORM

Potvin – Winnipeg Sept. 2010
Program form:

purpose – structure – process

The program is a structure operating processes to achieve purposes
Program as a system of action
Purpose

The program is a project of social transformation operated by state institutions to resolve given problems

Purpose is defined in response to a situation deemed problematic
Program as a system of action

- S-T Network
- Programming System
- Context
- Process
- Purpose
- Time
- Form
Intervention structure: Socio-technical network

- Structure: The (objective) organisation of relations amongst intervention components: actors and non-human elements (e.g.: knowledge(s), resources, artefact)

- Socio-technical network: Meta-organisation that links human and non-human entities (actants) which participate to a situation and which are defined by their identities, interests, projects and that are connected to one another. In turn these identities, interests and projects are defined through the connections with the network.

Callon, 1986
Program as a system of action

S-T Network

Process

Programming System

Time

Purposes

Form

Context

Programming System
Process

Process is a group of actions taken by actors to obtain finalities

A process is a group of actions linked by their finalities
Programmation system processes

Planning
Implementation
Sustainability
Relexivity
Planning

Strategic choices made by actors in the program: Which aspects of the problem? For which populations? Through which actions? With what objective?
Planning: Projection and renewing of program system’s form in context and time
Implementation

Setting the plan in motion: mobilization of actors AND OF USERS for its deployment/adjustment/redefinition according to different contexts in time
Expansion and consolidation of the socio-technical network
Implementation: Expanding the socio-technical network through events (making new connections)
Sustainability
Reproducing the program in time / maintaining identity through transformations
In order to reproduce itself, the program keeps on transforming itself
In the sustainability processes, strengthening existing connections takes precedence over creating new connections
Sustainability: Maintaining and renewing program system’s identity through its evolution and changing context
Reflexivity

- Practical knowledge results from the confrontation of an objective world and subjective representations
  - Actions are always constrained and enabled by objective structures
  - Actions are only possible through subjective representations of an active subject
- Reflexive knowledge
  - Continuous movements between various points of view
- Always situated in place and time
Reflexivity

Feedback

Actors’ ability to transform the program according to information generated by the program
Reflexivity: feedback loop of knowledge about the program space in program’s form
Processes of the programmation system

Planning

Implementation

Sustainability

Reflexivity
Program system in the program space

Program system

Evaluation system

Time

Context

Form
Day 1
Part 3:

Modeling a program’s socio-technical network
Translation

- Process by which socio-technical networks expand and consolidate: new connections between previously unrelated elements and strengthening of connections
- Ongoing interpretations/reinterpretations by actors of their roles and of the innovative product, going from their respective interests and their power relations and leading to the elaboration of compromises.
- Four moments of translation: problematisation, interestment, enrolment, mobilisation

Callon, 1986
Problematisation

- Setting in motion of actors around a provisional and minimum project
- Social AND technical entities
- Definition of the problem/situation – by the project or innovation promoters, identification of relevant actants, their role (identity), interests (to gain or loose) and the issues linking them
- Identifying the connections to be worked
- Inter-definition: the network is constituted by its actants and connections whose roles and identities are shaped by their connections into the network
- Role of the translator
Interestment

- Set of strategies adopted by the various actants with a view to:
  - rallying the other actants around a shared objective
  - defining their role within the network
- Interestment strategies seek to define the identity and role of the other actants.
- Interestment strategies take shape in the innovation artefacts (device)
Enrolment

- Designates the device by which a set of interrelated roles is defined and attributed to actors who accept them
- The group of multilateral negotiations, trials of strength and tricks that accompany the interestment and enable them to succeed.
- Leads to acceptance of a precise role
- Enabling the network’s consolidation
Mobilisation

- Concerns the involvement of a critical mass of actors in the action system so that innovation becomes relevant, useful, indispensable
- Leads to network expansion
- The role of a spokesperson: legitimacy
- Controversies and black boxes
Translation
Controversy

- Failure to mobilize and displace network’s elements
- Confrontation of various competing interpretations of the same phenomenon or issue
- Precedes the emergence of change or innovation
- Resolution occurs by orienting actants towards a solution, compromise, or obligatory passage point, which allows them to cooperate while at least partly satisfying their interests
- Makes the network connections and actants’ identities salient
- Dynamic principles in socio-technical networks
- Role of mediators
Black box

- Consolidated connections in a socio-technical network
- Disappearance of translation
- Actants as intermediaries – strength of connections
- Potential for controversies
Definitions

- **Actors**: entities whose actions and interests can potentially influence the orientation of the action.
- **Identity– role**: what are actors doing in relation to the action; who are they speaking for; what is their constituency.
- **Vision of the problem/solution**: what kind of positions do they defend concerning the problem/solution.
- **Investment**: what time, resources, prestige, knowledge, cultural elements were involved in the connection between actors and problem/solution.
Definitions (con’t)

- Interest: project and elements at stake in the situation, that can be lost or gained through the situation.
- Controversy: Failure to mobilise network elements; disalignment between actors about: knowledge basis; meaning of experience, or values.
- Connection: interactions and transactions that occur between two nodes in a network.
- Socio-technical network: Assemblage of human and non human elements that are connected and whose interests are aligned. Can be mobilised by legitimate spokespersons.
**Tool 1:**
What do we know about the program we are about to evaluate?

<table>
<thead>
<tr>
<th>Components</th>
<th>What do we know?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td>What problems does this program intend to solve? Which populations is the program aimed at? (destined to) In which communities is it implemented? (Any information that is relevant to understand which mechanisms are likely to be affected by the program)</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Who are the actors in the program? What is their knowledge? What are their resources? Their interdisciplinary relationships? Intersectoral? How are they connected</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>Which actions have been planned? Which actions have been accomplished and how are they related to each other? Does the program benefit from recurring resources? Is there an established routine to its actions?</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>What results does the program aim to achieve? How many can be observed?</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>How many years has the program been in operation? Has it undergone any changes through time? Which iteration of the program is being modeled?</td>
</tr>
<tr>
<td><strong>Reflexivity</strong></td>
<td>Is there an established mechanism to revise the program?</td>
</tr>
</tbody>
</table>
### Tool 2: 
**ACTOR–NETWORK MODEL**

<table>
<thead>
<tr>
<th>ACTANT</th>
<th>IDENTITY</th>
<th>INTEREST</th>
<th>CONNECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Spokes-persons)</td>
<td>(in relation to action)</td>
<td>(means to ends/ to gain or lose)</td>
<td>Black-box</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Controversy</td>
</tr>
</tbody>
</table>

**Period:**  

- **Data source:** Potvin - Winnipeg Sept. 2010
# Tool 2: Actor-Network Model

<table>
<thead>
<tr>
<th>ACTANT (Spokespersons)</th>
<th>IDENTITY (in relation to action)</th>
<th>INTEREST (means to ends/to gain or lose)</th>
<th>CONNECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Cook</td>
<td>Provide children with skills and interest in food preparation; experience success in school</td>
<td>Importance of culinary education in school curriculum</td>
<td>Black-box</td>
</tr>
</tbody>
</table>

**Period:**

**Data source:** Potvin - Winnipeg, Sept. 1, 2010
## Tool 2: Actor-Network Model: LC

<table>
<thead>
<tr>
<th>ACTANT (Spokespersons)</th>
<th>I DENTITY (in relation to action)</th>
<th>I NTEREST (means to ends/to gain or lose)</th>
<th>C O N N E C T I O N S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atelier cinq épices</td>
<td>Nutrition expertise</td>
<td>Jobs&lt;br&gt;Scaling up&lt;br&gt;Prestige/visibility</td>
<td>Science of good nutrition&lt;br&gt;Link between good nutrition and health&lt;br&gt;Necessity of pedagogical expertise</td>
</tr>
<tr>
<td>Participating schools</td>
<td>Provide access to children&lt;br&gt;Reinforce learning</td>
<td>Aligning with Quebec education Program&lt;br&gt;Increasing interest for school by children</td>
<td>Presence of parents in school&lt;br&gt;Presence of non unionised professionals in public schools</td>
</tr>
<tr>
<td>Parents</td>
<td>Encourage children&lt;br&gt;Reinforce learning through link with homes</td>
<td>Linkage with school&lt;br&gt;Integration with community&lt;br&gt;Relationship with children</td>
<td>Children in school&lt;br&gt;Celebrating children’s success&lt;br&gt;Link with classroom activities</td>
</tr>
</tbody>
</table>

**Period:**

**Data source:** Potvin – Winnipeg, Sept. 1, 2010
### Tool 2: Actor-Network Model: Culinary Workshop

<table>
<thead>
<tr>
<th>ACTANT</th>
<th>IDENTITY (in relation to action)</th>
<th>INTEREST (means to ends/to gain or lose)</th>
<th>CONNECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Creating nutritious meal</td>
<td>Being liked and adopted by kids</td>
<td>Link with health</td>
</tr>
<tr>
<td>Nutrition knowledge</td>
<td>Linking food to health</td>
<td>Being put to use</td>
<td>Link to health</td>
</tr>
<tr>
<td>Teacher</td>
<td>Enable learning, regulate class processes</td>
<td>Maintaining authority</td>
<td>Role in workshop&lt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interactions with nut.</td>
</tr>
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**Period:**

**Data source:** Potvin – Winnipeg, Sept. 2010
Health Promotion Evaluation Practices in the Americas
Values and Research

Louise Potvin and David McQueen Editors

More and more, health promotion is a crucial component of public health, to the extent that public health interventions are called on to prove their effectiveness and appraised for scientific validity, a practice many in the field consider self-defeating. Health Promotion Evaluation Practices in the Americas cogently demonstrates that scientific rigor and the goals of health promotion are less in conflict than commonly thought, synthesizing multiple traditions from countries throughout North, Central, and South America (and across the developed-to-developing-world continuum) for a volume that is both diverse in scope and unified in purpose.

The book’s examples—representing robust theoretical and practical literatures as well as initiatives from Rio de Janeiro to American Indian communities—explain why health promotion evaluation projects require different guidelines from mainstream evaluation work. The editors identify core humanitarian principles associated with health promotion (participation, empowerment, equity, sustainability, intersectoral action, multi-strategy, and contextualism), while chapters highlight challenges that must be mastered to keep these principles and scientific objectives in sync, including:

- Building health promotion values into evaluation research projects.
- Expanding the use of evaluation in health promotion.
- Developing meaningful evaluation questions.
- Distinguishing between community-based participation research and evaluation-based participation.
- Evaluating specifically for equity.
- Designing initiatives to foster lasting social change.

The applied knowledge in Health Promotion Evaluation Practices in the Americas: Values and Research can bring the goals of intervention into sharper focus for practitioners, evaluators, and decision-makers and facilitate communication on all sides—necessary steps to progress from study findings to real-world action.
References

References