Making Causal Claims

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The Context

- Interventions are aimed at bringing about development impacts
- Interventions are not acting on their own. There may be:
  - other events and conditions at play
  - other interventions at work
  - other relevant contextual factors
- Development impacts result from such a mix of actions and context

The Issue

- In this context, what can we say about the relationship between the intervention and observed results?
  - The intervention 'caused' the results?
  - The intervention made a difference?
  - The intervention contributed to the results?
  - The intervention can be attributed to a specific net result?
- What makes sense?

Improving education outcomes for girls

Intervention operates through raising the knowledge, skills and awareness of teachers.

Other relevant factors here might be:

- the willingness of teachers to support the education of girls
- the support of parents for their daughters to attend schools and study at home
- the ability of girls to get to the schools
- the adequacy of the schools to accommodate girls

Conceptualizing Causality

What kind of causal relation exists then between a development intervention (X) and an impact (Y)?

- Can we say X causes Y? No
- Is X necessary for Y? No
- Is X sufficient for Y? No

But we clearly want to make some causal link between the intervention and the impact

Conceptualizing Causality

- As might be imagined, these conundrums have been well addressed in the vast literature on causality. There is an answer!
- An intervention works as part of a broader **causal package**. And if it works, then this causal package is indeed sufficient to bring about the impact.
- Further, if the intervention is 'working', then it is an essential part of this causal package.

INUS Causality

- This is the very useful concept of INUS causality and INUS conditions.
- An Insufficient but Necessary part of a condition that is itself Unnecessary but Sufficient for the occurrence of the effect (Mackie 1974).
- Mackie argued that much of the time, when we are talking about causality we are in fact talking about INUS causality.

Intervention Causality

- Thus, an intervention "made a difference" when:
  - The ***intervention causal package*** was sufficient to bring about the impact, and
  - The intervention was a necessary component of the causal package
- The intervention in this case is a ***contributory cause***. On its own it is neither necessary nor sufficient.

The Intervention as Trigger

Intervention is one among several 'causes'. But is that all? We probably expect more, that the intervention:

- acts as a trigger to start the causal chain (the spark that lights the fire)
- and may act as sustaining support for change along the way (gasoline to keep the fire going)

A ***principal contributory cause***

Meaningful Causal Questions

1. Has the intervention made a difference?
   - Is the intervention a contributory cause?
   - What contribution has the intervention made?
2. Why has the impact occurred?
   - How did the causal factors bring about the result?
   - What was the context and the mechanisms?
   - What role did the intervention play?

Demonstrating Contributory Cause

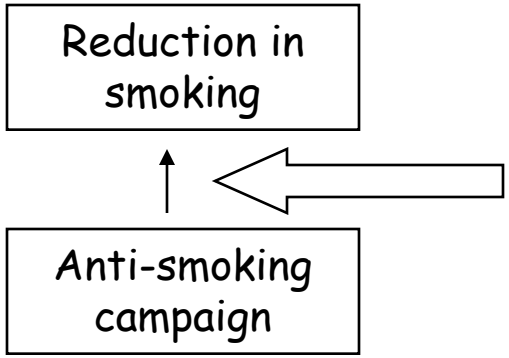
How then to show that the intervention made a difference?

- Connecting to theory-based approaches
- Sufficiency through generative (process) causality approaches

One approach: contribution analysis

Theories of change

- A results chain with embedded assumptions, risks and other explanatory factors identified
- An explanation of what has to happen for the results chain to work

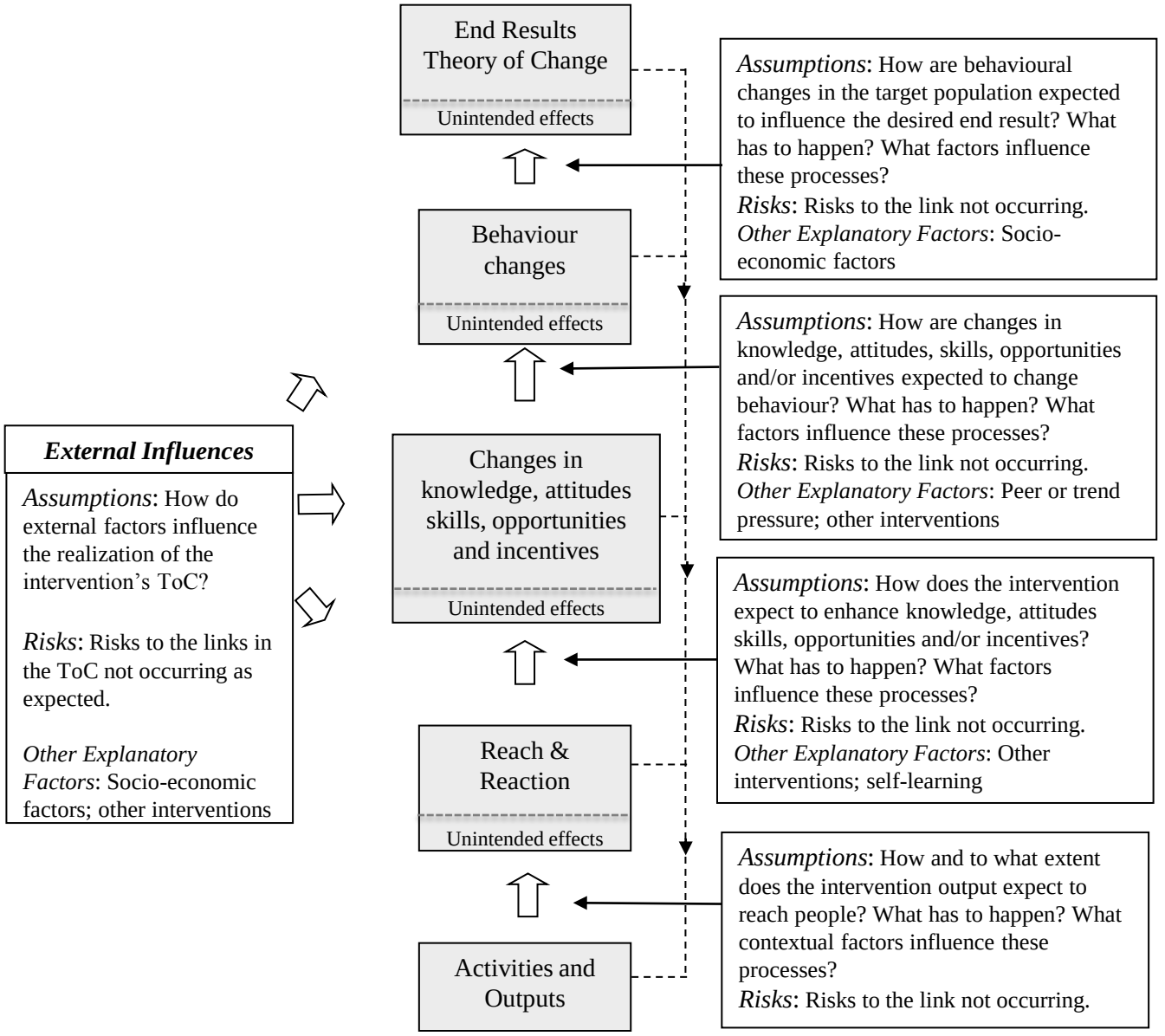


Assumptions: target is reached, message is heard, message is convincing, no other major influences at work

Risks: target not reached, poor message, peer pressure to smoke very strong

Other Explanatory Factors: reduction due to trend pressure or price increases

A Generic Theory of Change



Theories of Change and Causal Packages

- *Theories of change are causal packages, and more*:
  - ToC identify supporting factors (assumptions) and confounding factors (risks)
  - ToC set out the relationship between the supporting factors and the intervention
- *ToC is a model of the intervention as a contributing cause*

Four approaches to causal attribution

- *Regularity frameworks* that depend on the frequency of association between cause and effect - basis for statistical approaches
- *Counterfactual frameworks* that depend on the difference between two otherwise identical cases – basis for experimental and quasi experimental approaches
- *Comparative frameworks* that depend on combinations of causes that lead to an effect - basis for 'configurational' approaches, such as QCA
- *Generative frameworks* that depend on identifying the causal links and 'mechanisms' that explain effects –basis for 'theory based' and 'realist' approaches.

Generative Causation

- Process or mechanistic causality
- Tracing the links in between causal events
- *Everyday causality*: auto mechanic, air crashes, forensic work, doctors
- The basis for theory-based evaluation approaches

Contribution analysis: the practice

1. Set out the causal question
2. Critically develop the expected theory of change
3. Gather the existing evidence verifying (or not) the theory of change
4. Assess the resulting contribution story
5. Seek out additional evidence
6. Revise & strengthen the contribution story

Contribution Analysis

CA shows that an intervention is a contributory cause:

- The expected result occurred
- The causal package is sufficient
  - supporting factors (assumptions) occurred and any other supporting factors have been included in the ToC
  - plausible rival explanations have been accounted for
- The intervention is necessary for the package to be sufficient

Main Messages

- We expect most interventions are **principal contributory causes**
  - The intervention causal package is sufficient & the intervention is essential to the package
- Want to also know why the impact occurred; to be able to explain
- ToC are models of the intervention as a contributory cause
- Contribution analysis and other T-B approaches can be used

Some References

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