

### Contemporary Theory Based Methods

There are various contemporary methods, some of which are only just beginning to be used by evaluators. These include:

- Theory based evaluation
- Realist Evaluation
- Qualitative Comparative Analysis
- Contribution Analysis, and
- Process tracing

Each of these is briefly introduced in this Annex together with additional source material for those readers who want to explore methods in greater depth.

#### **Theory based evaluation and Theory of Change**

Carter, R. (2012), Governance and Social Development Resource Centre, University of Birmingham <http://www.gsdr.org/docs/open/HDQ872.pdf>

‘There are some core features of the TBE approach that appear consistent across the main accounts of the approach:

- Opening up the black box to answer not simply the question of what works, but also why and how it worked. This is key to producing policy relevant evaluation.
- Understanding the transformational relations between treatment and outcomes, as well as contextual factors.
- Defining theory as the causal model or theory of change that underlies a programme.
- Having two key parts: conceptual (developing the causal model and using this model to guide the evaluation); and empirical (testing the causal model to investigate how programme cause intended or observed outcomes).
- Being issues led, and therefore, methods neutral.’

Mayne and Stern (2013):

Theory of change [is] a model showing how the intervention is expected to work, by laying out and explaining the various steps in the causal chain from the intervention activities to outputs, outcomes and impacts. A sound theory of change recognises the role of the key stakeholders along the causal chain and the assumptions about what has to happen for the intervention to work. In addition, the perceived risks to the intervention working, and other external factors influencing the expected outcomes and impacts, are made explicit. Further, a fully developed theory of change should consider unintended effects and rival explanations

See also:

Blamey, A., & Mackenzie, M. (2007). Theories of change and realistic evaluation: Peas in a pod or apples and oranges. *Evaluation*, 13(4), 439–455.

Mayne J. and Stern E. 2013. Impact evaluation of natural resource management research programs: a broader view. ACIAR Impact Assessment Series Report No. 84. Australian Centre for International Agricultural Research: Canberra. [http://aci Stame, N. \(2004\). Theory-based evaluation and varieties of complexity. Evaluation, 10\(1\), 58-76.ar.gov.au/files/ias84.pdf](http://aci Stame, N. (2004). Theory-based evaluation and varieties of complexity. Evaluation, 10(1), 58-76.ar.gov.au/files/ias84.pdf)

### Realist Evaluation

*Quality Standards for Realist Evaluation Rameses II Project*

[http://ramesesproject.org/media/RE\\_Quality\\_Standards\\_for\\_evaluators\\_and\\_peer\\_reviewers.pdf](http://ramesesproject.org/media/RE_Quality_Standards_for_evaluators_and_peer_reviewers.pdf)

'Realist evaluations are underpinned by a realist principle of generative causation. That is, underlying causal processes (called 'mechanisms') operate (or not) in certain contexts to generate outcomes. The explanatory framework is Context + Mechanism = Outcome (CMO). Realist evaluations aim to understand how different mechanisms generate different outcomes in different contexts. This intent influences everything from the type of evaluation question(s) to an evaluation's design (e.g. the construction of a realist programme theory, recruitment process and sampling strategy, data collection methods, data analysis, to recommendations)'

*Gill Westhorp (2014) Realist Evaluation: An Introduction. Methods Lab Overseas Development Institute London*

<http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9138.pdf>

'Realist approaches assume that nothing works everywhere or for everyone, and that context really does make a difference to programme outcomes. Consequently, policy-makers and practitioners need to understand how and why programmes work and don't work in different contexts, so that they are better equipped to make decisions about which programmes or policies to use and how to adapt them to local contexts. Consequently, realist evaluation does not ask 'what works?', 'does this work?' or (retrospectively) 'did this work this time?'. A realist research question contains some or all of the elements of how and why does this work and/or not work, for whom, to what extent, in what respects, in what circumstances and over what duration?'

See also:

*Ray Pawson, 2002. The Promise of Realist Synthesis, in Evaluation the International journal of theory, research and practice*

Downloadable

at

<https://www.kcl.ac.uk/sspp/departments/politicaleconomy/research/cep/pubs/papers/assets/wp4.pdf>

*Dieleman, Wong and Marchal*

[https://www.abdn.ac.uk/femhealth/documents/Realist\\_methods\\_workshop.pdf](https://www.abdn.ac.uk/femhealth/documents/Realist_methods_workshop.pdf)

### Qualitative Comparative Analysis (QCA)

Qualitative Comparative Analysis (QCA) is an approach to systematic cross-case comparison. It establishes what factors, common across cases, can explain similar outcomes; or what factors differ could explain different outcomes. Unlike most methods intended to draw generalized lessons across cases, QCA does not look at variables in isolation. It focuses on combinations or configurations of factors *within* single cases; and allows generalization only to the extent that these holistic combinations are preserved.

Although QCA establishes an association between a "dependent" condition (the outcome) and a number of "independent" conditions, the aim of QCA is not measuring correlation, or understanding how much a given variable "adds" to the outcome for each addition unit; but rather establishing a) what are the necessary conditions for an outcome and b) what are the sufficient combinations of conditions for the same outcome. Causal necessity means that an outcome is required: it can never be observed without the presence of certain conditions. Sufficiency means that the combination is good enough to produce the outcome and does not need any other requirement.

Qualitative Comparative Analysis is appropriate to identify the preconditions and make sense of the diversity in results across small numbers of cases when there are several but not many causal factors. It is not appropriate when the explanation is only one case.

Charles Ragin: What is Qualitative Comparative Analysis

[http://eprints.ncrm.ac.uk/250/1/What\\_is\\_QCA.pdf](http://eprints.ncrm.ac.uk/250/1/What_is_QCA.pdf)

Compass Website: <http://www.compass.org/wpseries/allWPdate.htm>

Tim Blackman, J Wistow, D Byrne (2013) *Using Qualitative Comparative Analysis to understand complex policy problems Evaluation*, International journal of theory, research and practice

<http://oro.open.ac.uk/37540/2/5C07E325.pdf>

### Contribution Analysis and Contributory Causes

#### The Six Steps of Contribution Analysis

Step 1: Set out the attribution or contribution problem to be addressed.

Step 2: Develop a theory of change and risks to it.

Step 3: Gather the existing evidence on the theory of change.

Step 4: Assemble and assess the contribution story and rival explanations.

Step 5: Seek out additional evidence.

Step 6: Revise and strengthen the contribution story.

‘The notion of a ‘contributory’ cause, recognizes that effects are produced by several causes at the same time, none of which might be necessary nor sufficient for impact. It is support for civil society, when combined with an effective poverty reduction strategy, suitable capacity development and policy coherence in partner government policies that lead to legitimate governance and provide the pre-conditions for enhanced development results. It is unlikely to be support for civil society alone. Just as it is smoking along with other factors and conditions that result in lung cancer, not smoking on its own, so also it is development intervention along with other factors that produce an impact.’

‘As part of a causal package of other lifestyle, environmental and genetic factors cigarettes can cause cancer; but they need not and sometimes cancer can be ‘caused’ by a quite different mix of causes in which tobacco plays no part. The causal package is sufficient but can also be unnecessary: i.e. there are other “paths” to impact, which may or may not include the intervention. The intervention is a contributory cause of the impact if: the causal package with the intervention was sufficient to bring about the impact, and the intervention was a necessary part of that causal package.’ Broadening the Range of Designs and methods for Impact evaluation Stern et al 2012 (pp40 & 41). <http://r4d.dfid.gov.uk/Output/189575/>

‘A strong causal claim about a multifaceted sufficient intervention would be that the intervention was a principal contributory cause of the relevant observed results. That is:

The intervention was a necessary component of a package of causal factors that together were sufficient to contribute to an observed result. In other words, the intervention made a difference. In addition, the intervention played a key role; it was the trigger that initiated the chain of events and through its supporting activities sustained the chain of events that contributed to the observed results.’

See also:

John Mayne, Useful Theory of Change Models. 2015 Canadian Journal of Program Evaluation / La Revue canadienne d'évaluation de programme 30.2, 119–142  
[https://evaluationcanada.ca/system/files/cjpe-entries/30-2-119\\_0.pdf](https://evaluationcanada.ca/system/files/cjpe-entries/30-2-119_0.pdf)

John Mayne, Contribution Analysis: Coming of Age? In Evaluation 18.3 July 2012. Special Issue: Contribution Analysis

SOCIAL SCIENCE METHODS SERIES, Guide 6: Contribution Analysis. Scottish Government

<http://www.scotland.gov.uk/resource/doc/175356/0116687.pdf>

### Process Tracing

<http://govthesis.site.wesleyan.edu/research/methods-and-analysis/analyzing-qualitative-data/process-tracing/>

'This approach was first developed in 1979 and was fleshed out comprehensively in George and Bennett's Case Studies and Theory Development in the Social Sciences (2005). Process tracing centers on dissecting causation through causal mechanisms between the observed variables, primarily in case studies. In essence, the focus of process tracing is on establishing the causal mechanism, by examining the fit of a theory to the intervening causal steps. Theorists using process tracing ask 'how does "X" produce a series of conditions that come together in some way (or do not) to produce "Y"?' By emphasizing the causal process that leads to certain outcomes, process tracing lends itself to validating theoretical predictions and hypotheses.

Despite often focusing on only a single case, process tracing is a useful tool for testing theories. Researchers must examine a number of histories, archival documents, interview transcripts, and other similar sources pertaining to their specific case in order to determine whether a proposed theoretical hypothesis is evident in the sequence of a case (George and Bennett, 6). Looking at these sources in terms of the sequence and structure of events can serve as evidence that a given stimulus caused a certain response in a case. Process tracing aims to ascertain the causal process linking an independent variable(s) to the outcome of a dependent variable, particularly in small-n studies. This method is particularly useful for looking at deviant cases and determining the specific factors that lead them to diverge from expected trends. While process tracing may not be able to exclude all but one theory in a given case, it can narrow the range of possible explanations and can disprove claims that a single variable is necessary or sufficient to produce an outcome.'

'According to Beach and Pedersen (2013: 2, 28) process tracing is a within-case study method for making causal claims based on a mechanistic and deterministic view of causality. In relation to evaluation, process tracing aims to explain how an intervention has worked in real-world cases. The mechanistic element of process tracing implies that a 'causal mechanism' needs to be theorized as a process – described as an unbroken chain of action and reaction (activities) enacted by entities (actors) – that connects the potential cause with its hypothesized outcome.'

See also:

Barbara Befani and John Mayne (2014) Process Tracing and Contribution Analysis: A Combined Approach to Generative Causal Inference for Impact Evaluation

<http://onlinelibrary.wiley.com/doi/10.1111/1759-5436.12110/abstract>

David Collier (2011), Understanding Process Tracing in Political Science and Politics, 44.

<http://polisci.berkeley.edu/sites/default/files/people/u3827/Understanding%20Process%20Tracing.pdf>