



## An Approach for Developing Middle-Range Theory

There is no standardised approach to developing a middle-range theory<sup>[1]</sup>, and researchers don't often provide sufficient detail on the methods used to develop them. This means there is a lack of transparency and guidance for others who are developing such theories. In this methods snapshot, we describe the approach we used to develop a middle-range theory called the Theory of Systems Change.

### What is it?

Middle-range theories are a middle ground between broad, overarching theories (so-called grand theories) and the categorisation of 'real-world' data.<sup>[2]</sup>

Middle-range theories can provide the links between empirical observations and grand theory by creating boundaries or assumptions about a field of interest that can generate propositions and be empirically tested.

The Pathways in Place-Victoria University (VU) team developed the Theory of Systems Change<sup>[3]</sup>, a middle-range theory which aims to improve our theoretical understanding of the role of research in improving population health outcomes within a complex and ever-changing system.

The approach we took to develop the Theory of Systems Change involved four phases (described below and depicted in Figure 1). Others can adapt this approach to their own circumstances or context.

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## Phase 1: Preliminary activities

In this phase, we co-created our funding proposal with other researchers, practitioners, and our funder, The Paul Ramsay Foundation. We also held workshops and meetings with the Pathways in Place team and the program's leadership group.

Through these activities, we identified the funder's priorities, the research team's expertise, and existing research partnerships. This informed the scope and boundaries of the Theory of Systems Change, which were as follows:

- adopts a place-based, systems change approach;
- identifies the role of research in place-based systems change; and
- focuses on collaboration across disciplinary and sector boundaries.

## Phase 2: Theory development

The second phase involved the following activities: backwards mapping, proposition development, and conceptualising the key terms in the theory.

### Backwards mapping

We began with our long-term outcomes and worked 'backwards' toward the earliest changes that need to occur to achieve these outcomes.<sup>[4]</sup> The main components of backwards mapping involved identifying:

- our desired long-term outcomes (population health improvements);
- the properties and practices of a well-functioning system that would improve population health outcomes;
- the conditions that sustain practices in the long-term. We identified system capacity as central to support sustainable practice; and

- potential pathways through which research could contribute to embedding system capacity, the attributes of research that would lead to these outcomes, and how these relate to the practices of a well-functioning system.

Throughout this process, we also considered:

- the preconditions across research, practice, and public policy that influence the ability of research to embed capacity into the system.

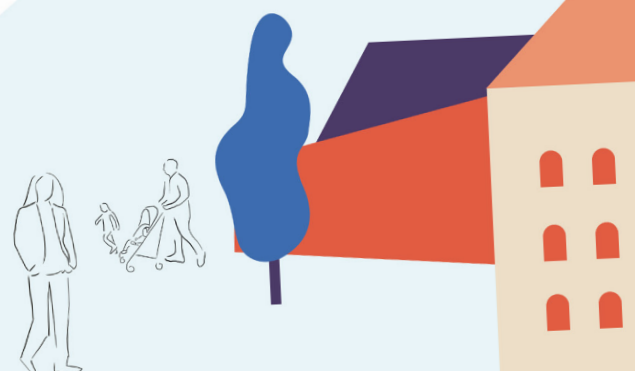
To address each component above, we followed an iterative process that involved moving back-and-forth between deductive reasoning based on existing theories and evidence, and inductive reasoning drawn from our own research, as well as the experiences and expertise shared by other researchers, practitioners, and policy-makers

### Proposition development

Based on the outcomes of backwards mapping, we developed a series of propositions that can be tested through research and are general enough to be tested across different contexts.<sup>[1]</sup>

### Conceptualising key terms

We conceptualised key terms, which is necessary to provide a common understanding of the language used in the theory.<sup>[2-5]</sup>



### Phase 3: Scripting the Theory of Systems Change into images

We worked with a graphic artist to develop images of the Theory of Systems Change.<sup>[3]</sup> We developed these images for two main two purposes:

- analytic integration whereby the images were a complementary reflexivity strategy to better grasp the concepts and relationships within the Theory of Systems Change; and
- visual communication and representation of the Theory of Systems Change.<sup>[6]</sup>

### Phase 4: Examining the Theory of Systems Change against the criteria developed by Merton

In the final phase, we examined the Theory of Systems Change against the following criteria developed by Robert K. Merton<sup>[1]</sup>, a founding father of sociology:

- Does it include assumptions from which propositions can be developed and empirically tested?
- Does it exist in relationship to other (including grand) theories?
- Is it 'sufficiently abstract' to be applied in other contexts or situations?<sup>[7]</sup>
- Does it cut across macro and micro social problems?
- Does it include the 'specification of ignorance,' what is not known or still to be learned?<sup>[7]</sup>

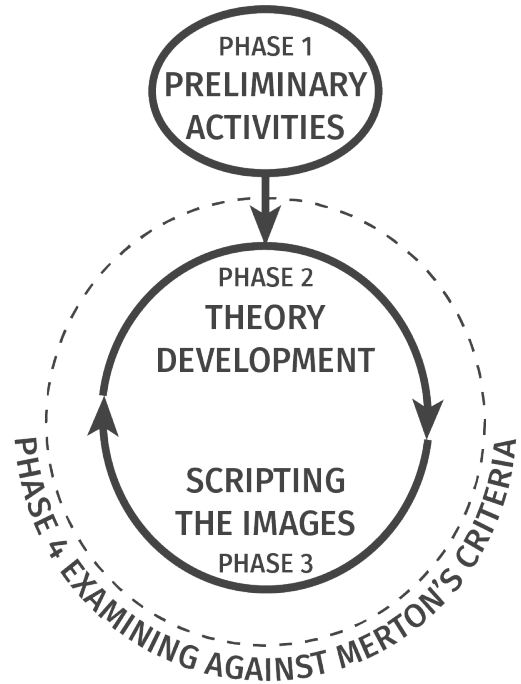


Figure 1 - Phases of development of the Theory of Systems Change

### What did we learn?

- Preliminary activities are essential to define the scope of the middle-range theory. The context in which the theory is developed will shape the subsequent focus and possibilities.
- Spanning and integration across fields and disciplines is challenging. For example, different terminology is often used to describe the same concept.
- Negotiating the breadth and depth of the middle-range theory necessary to achieve the balance between developing propositions and being general enough to be applied across contexts.
- Working with a graphic artist when developing a theory like the Theory of Systems Change can be helpful in clarifying key propositions and communicating the theory.



## References

- [1] Liehr P, Smith MJ. Middle range theory: Spinning research and practice to create knowledge for the new millennium. *Adv Nurs Sci* [Internet]. 1999;21(4). Available from: [https://journals.lww.com/advancesinnursingscience/Fulltext/1999/06000/Middle\\_Range\\_Theory\\_Spinning\\_Research\\_and.11.aspx](https://journals.lww.com/advancesinnursingscience/Fulltext/1999/06000/Middle_Range_Theory_Spinning_Research_and.11.aspx)
- [2] Merton, R. *Social Theory and Social Structure*. Glencoe, Ill: Free Press; 1968.
- [3] Craike M, Klepac B, Mowle A, Riley T (2023) Theory of Systems Change: An initial, middle-range theory of public health research impact. *Res Eval*. <https://doi.org/10.1093/reseval/rvad030>
- [4] Center for Theory of Change. What is theory of change: Glossary [Internet]. 2023 [cited 2023 May 6]. Available from: <https://www.theoryofchange.org/what-is-theory-of-change/how-does-theory-of-change-work/glossary/>
- [5] Varpio L, Paradis E, Uijtdehaage S, Young M. The distinctions between theory, theoretical framework, and conceptual framework. *Acad Med J Assoc Am Med Coll*. 2020 Jul;95(7):989–94.
- [6] Archibald MM, Gerber N. Arts and mixed methods research: An innovative methodological merger. *Am Behav Sci*. 2018 Jun;62(7):956–77.
- [7] Blaikie N. *Designing Social Research: The Logic of Anticipation*. Cambridge, UK: Polity Press; 2000.

## About Pathways in Place

**Pathways in Place: Co-Creating Community Capabilities** is an innovative program of research and action that supports flourishing of children and young people. This Program is jointly delivered by Victoria University (Victoria, Australia) and Griffith University (Queensland, Australia) with funding generously provided by the Paul Ramsay Foundation.

The Program teams are each leading one of two complementary streams:

1. Early learning and development pathways (children and youth 0-15 y.o.), led by Griffith University in Logan (Queensland, Australia).
2. Pathways through education to employment (youth 15-24 y.o.), led by Victoria University in Brimbank (Victoria, Australia).



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The full paper on the development of the Theory of Systems Change can be found [here](#).

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