Putting the logic back in program logic

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Why is program logic so hard?

1. Trying to do too much.

   Kusher 2016 '....program logic or program theory model, the basic purpose being to identify the program theory of change (ToC)—its 'logic'.

   One logic, many theories, many many different ways of bringing about that conditions in a program logic for different people in different circumstances.

2. Fanciful. Immediate short term outcomes are generally neither necessary or sufficient for longer term outcomes.

3. Not being explicit about a theory of causality

   Often an implicit assumption that a theory of change is based on causal chains Kusher 2016 'the logic model has allegiance to linear rationality and identifiable casual chains...' rather than causal packages.

   Often end up as a shopping list of outcomes (pipeline) or a chain of outcomes that imply one causes the other (outcomes hierarchy) or at best that one is necessary before the other.

Complete this sentence

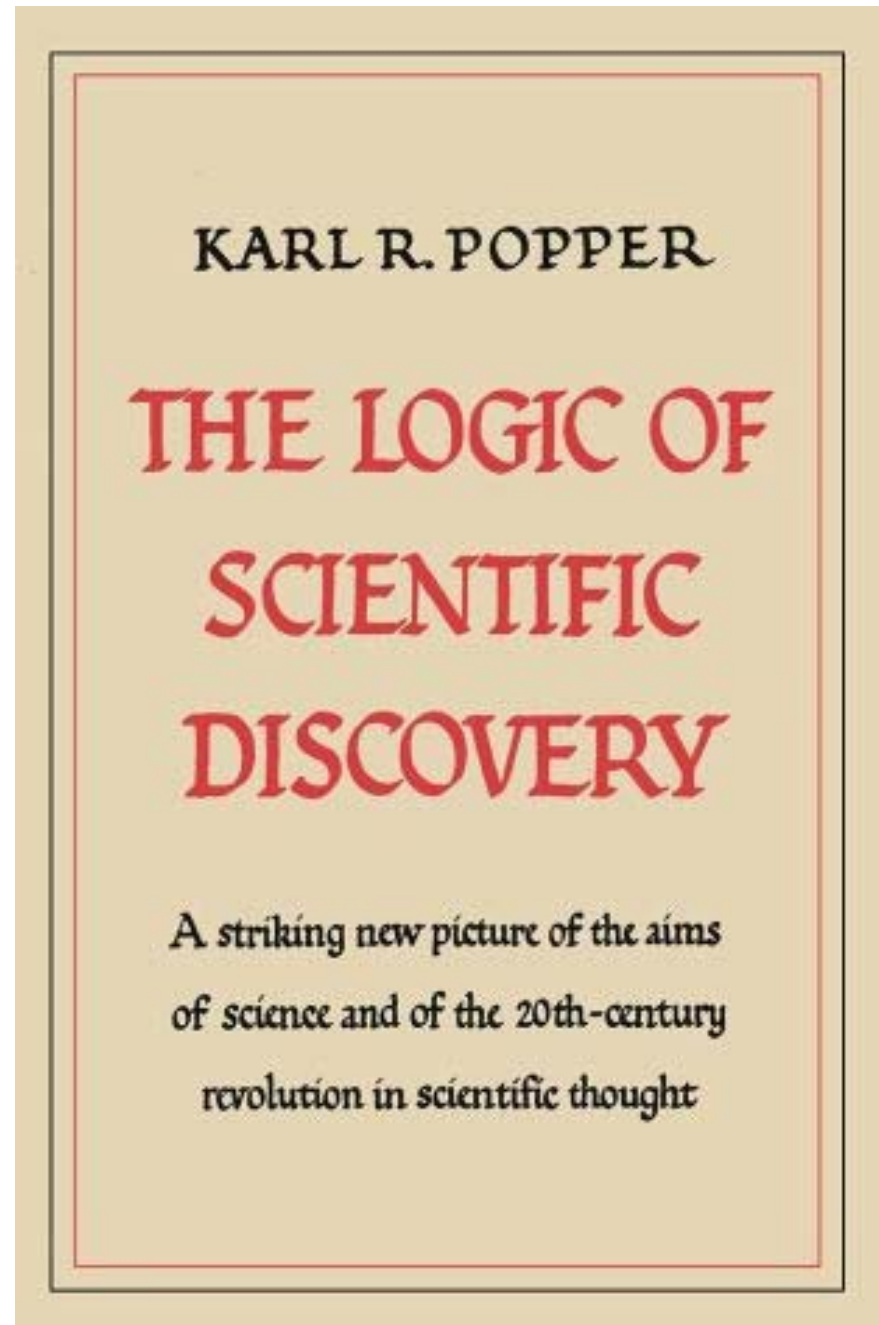- I know, I have a theory about what we should do…

- to get a better hair cut next time…
- to meet more people at the conference…

- Did you come up with a theory or did you come up with a course of action that was, or could be, justified by a theory?

I love theory, but...

- A program is NOT a theory
- A program is an argument about a course of action
- A theory is a special case of 'reasons to think this is a good idea' i.e. a warrant
- A good program will be based on many theories about the way the world is
  - The nature or root causes of a problem
  - Why certain things work
  - Theory will be *everywhere*
- But IT is not a theory – IT is a course of action
- Evaluating a program is about determining the validity and well groundedness of the argument that 'if we do x we will achieve y'.

Theory provides important warrants or justifications for components of a program. But theory is subordinate to logic.

Remember, Karl Popper's book was on the logic of scientific discovery, not the science of logical discovery.

KARL R. POPPER

THE LOGIC OF SCIENTIFIC DISCOVERY

A striking new picture of the aims
of science and of the 20th-century
revolution in scientific thought

- A program logic diagram can be in the form of an argument

- Yes, many of the 'why' questions will require theory – e.g. why do we expect if mothers engage with the program they will form better relationships with their children

- But in most program logics what is often missing *is* an explicit theory of causality

Mothers are aware of the workshops ⟶ Mothers attend the workshops

- A program logic does not display a 'casual chain' but a casual package or recipe as per Nancy Cartwright

What do we mean by 'caused'

- The presence of something is invariably followed by the presence of something else (**successionist**) [simple change]

- The configuration of certain somethings immediately brings about a new something (**configurationalist**) [complicated change]

- The presence of something with certain latent powers in contact with the latent powers of something else creates a new something (**generative**) [complex change]

Is this logical?
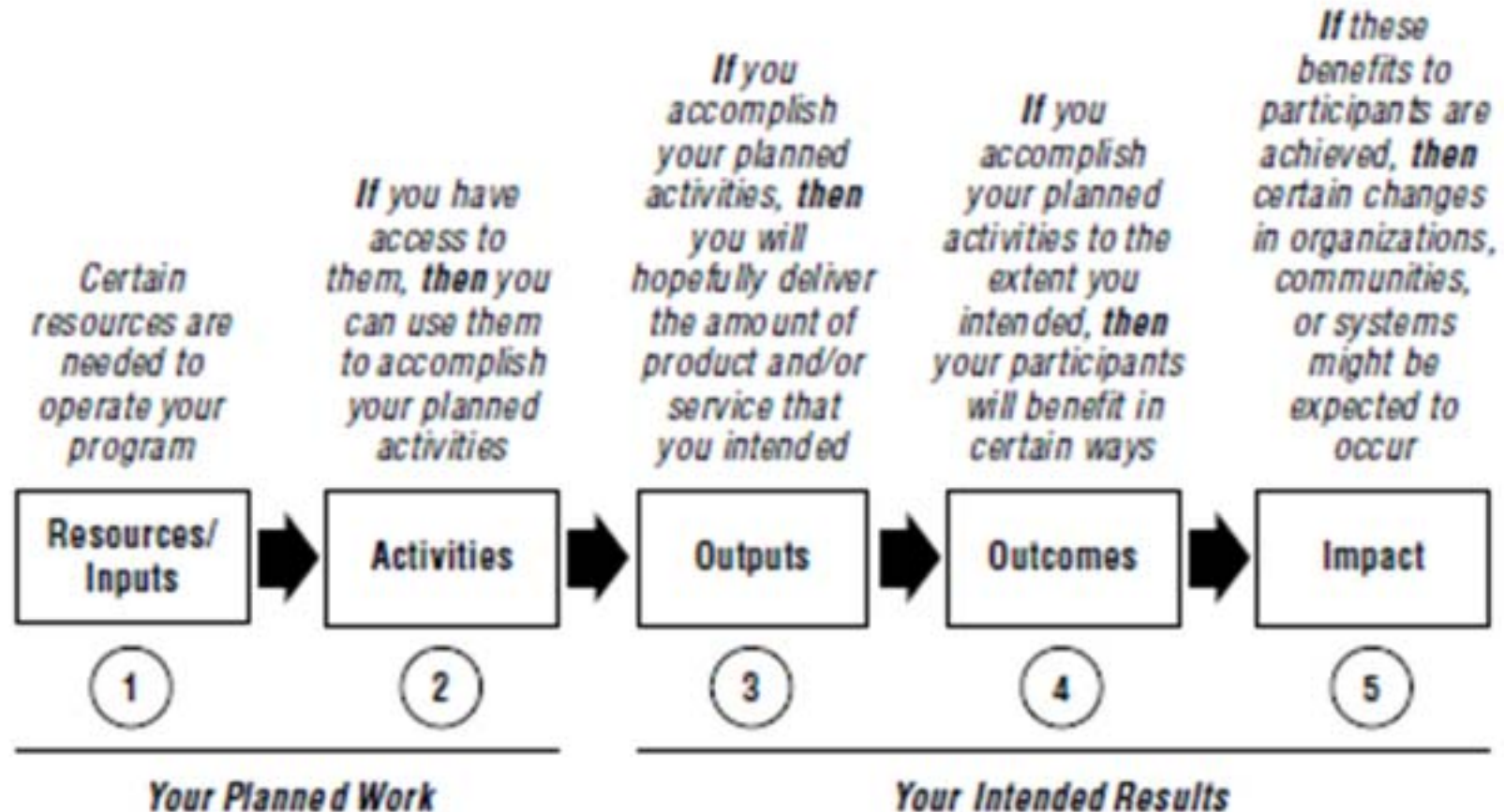
Source: Kellogg Foundation Guide to Logic Model Development

Program components as INUS conditions

- A program is not the only way to achieve something but it must be sufficient.
- Each component (i.e. output) is an insufficient but non-redundant part of an unnecessary (i.e. there are other ways), but sufficient condition (i.e. the program)
- A program has components that we think are necessary and when all achieved are sufficient for bringing about some outcome.
- IMPORTANT: Components are written as conditions 'who or what achieves, or is in, what state'
- Remember at this 101 level we are not focusing on the 'why' of each component at this stage or 'when it works and for whom' because we are focused on the conditions, not how or why they are brought about.

External factors include:
- Home factors do not outweigh confidence and life skills gained during Midnight Basketball
- External community tension does not outweigh opportunity to build relationships between different groups
- Community perspective on young people

Marginalised, vulnerable and at-risk young people are more engaged with their community, and have improved life skills, confidence and readiness for work

Local community has greater confidence to engage with marginalised youth and experiences reduced anti-social behaviour

Ultimate Outcomes

Young people experience long term benefits

Local community experiences long term benefits

Contributory Conditions

Young people benefit from participating in Midnight Basketball

VMC and tournament night volunteers benefit from facilitating Midnight Basketball

Sufficient Conditions

A fun, safe and professional 8 week tournament is run

VMC gains confidence to run MB tournaments over the two year period

VMC and community have capacity to implement Midnight Basketball

Young people who would most benefit sign up for Midnight Basketball

Comprehensive range of local groups working with marginalised youth identify suitable participants for Midnight Basketball

MBA provides oversight and mentoring of VMC

Necessary Conditions

Community commits to take on Midnight Basketball

At least one member of a reputable community organisation wants Midnight Basketball to run in their local community

Marginalised, vulnerable and bored 'at-risk' youth face barriers to learning positive behaviours and gaining opportunities that would break the cycle of disadvantage

Problem

**OUTPUTS
(Deliverables considered necessary for program success)**

1. Intended applicants are aware of the XX grant program
2. Grant terms and conditions are attractive to intended applicants
3. Grant eligibility criteria focus on grantees with size and scope to develop innovations that link primary research with extension and adoption
4. Grant selection criteria balance the potential for innovation with the risk of project failure
5. Applicants find application process clear and straightforward and submit quality applications
6. Selection panel has the skills and experience to identify applicants with the greatest chance of success (i.e. project completion and adoption)
7. Selection panel obtains the information they require to make quality decisions
8. Grant administrators negotiate contracts with successful applicants and ensure project plans are in place to manage risks and support project success
9. Grant administrators collect information from grantees required for monitoring, evaluation and reporting

OU

**SHORT
(Program is sufficient for these)**

Grantees commence funded projects and meet contracted milestones

Grantees disseminate findings and promote adoption of new technologies and practices to farmers

Farmers are aware of new technologies and practices available

Farmers increase knowledge of new technologies and practices and see the benefits of adopting these practices

Translating terms

- Inputs = things we will need to get this program off the ground
- Activities = what we do, the means to an end.
- Outputs = the ends to which our means are directed AND the premises in an argument.
    - Outputs and other premises are written in the form of condition states—'who or what is in what state'
- Assumptions: implicit premises on which we are relying but not really doing anything about, at this stage
- Outcomes (immediate) = the claim i.e. that which the conditions are through to be sufficient for bringing about.
- Medium or longer term outcomes = a second claim that moves from the immediate intended outcome to include external factors. Programs will be contributory if they provide a condition which is nether necessary or sufficient. But they may provide a necessary condition or a sufficient condition.
- External factors = other parts of a casual package leading to a medium or longer term outcome in addition to the immediate intended outcome
- Theories of change = a special case of the broader class of warrants, or reasons to accept the premises (condition states) will if all brought together, lead to the outcomes.

Evaluating a program logic

- An argument to be sound must be valid and well grounded.
- Did each condition occur (at all times and in all places?)
- Was each condition actually necessary?
- Was the combination of 'necessary' conditions sufficient for the short term outcome
- Was the short term outcome sufficient or does it contribute to longer term outcomes?

Evaluating a program logic

- Evaluation helps us assess the adequacy of the argument structure and warrants (validity) and the truth or falsity of the premises (well-groundedness)
  - Conditions not always brought about? Failures of implementation GOTO *process evaluation* OR failures of theory (i.e. warrants do not hold in all times at all places) GOTO *Realist evaluation*.
  - Conditions are insufficient for short term outcomes? explore unfounded assumptions and contextually constrained mechanisms GOTO *Realist evaluation*.
  - Conditions might not be necessary? GOTO *QCA*
  - Short term outcomes not sufficient for longer term outcomes – very common, incomplete causal package and/or overpowering external factors. Construct a *second argument*.
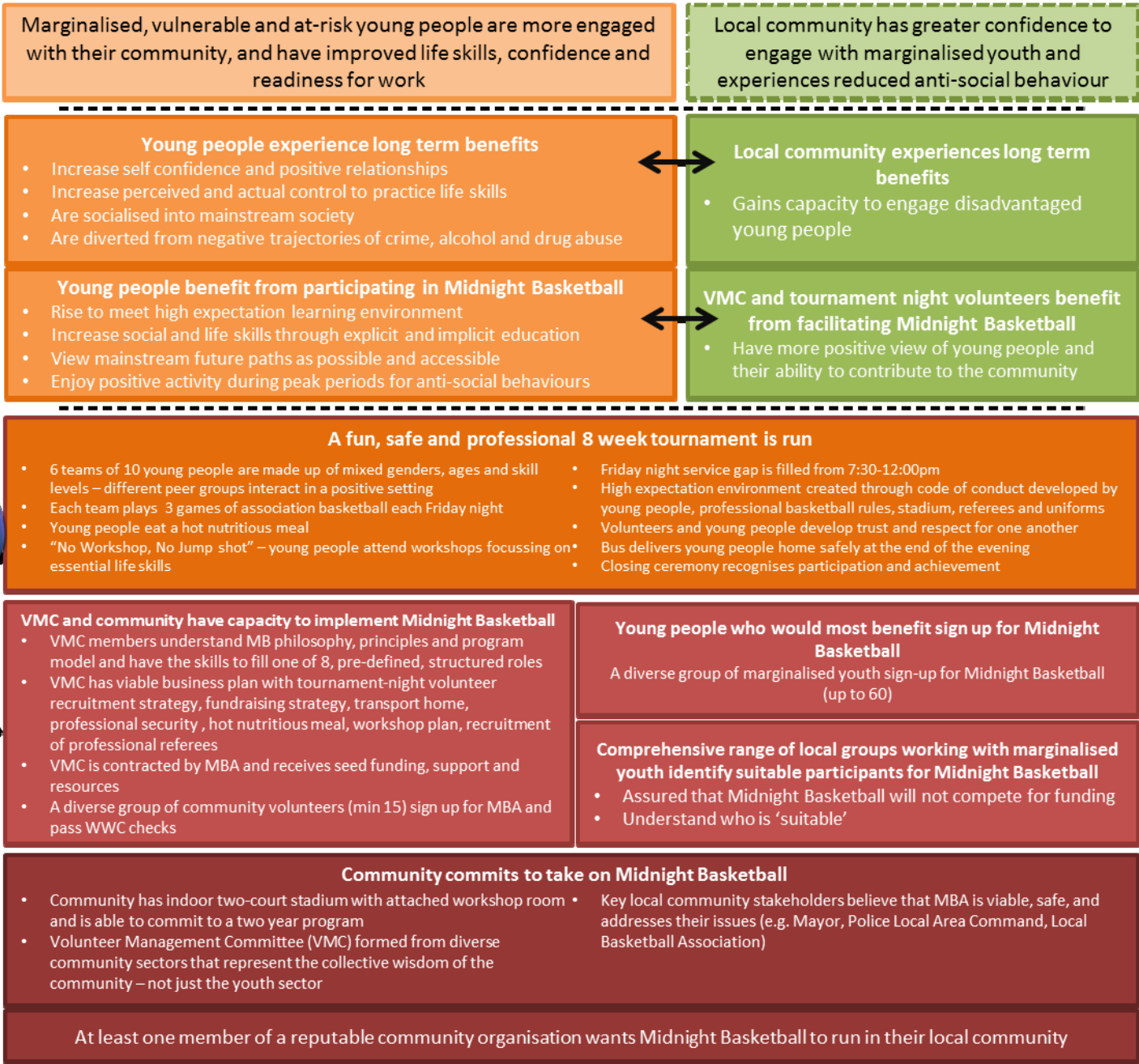
Marginalised, vulnerable and at-risk young people are more engaged with their community, and have improved life skills, confidence and readiness for work

Local community has greater confidence to engage with marginalised youth and experiences reduced anti-social behaviour

External factors include:
- Home factors do not outweigh confidence and life skills gained during Midnight Basketball
- External community tension does not outweigh opportunity to build relationships between different groups
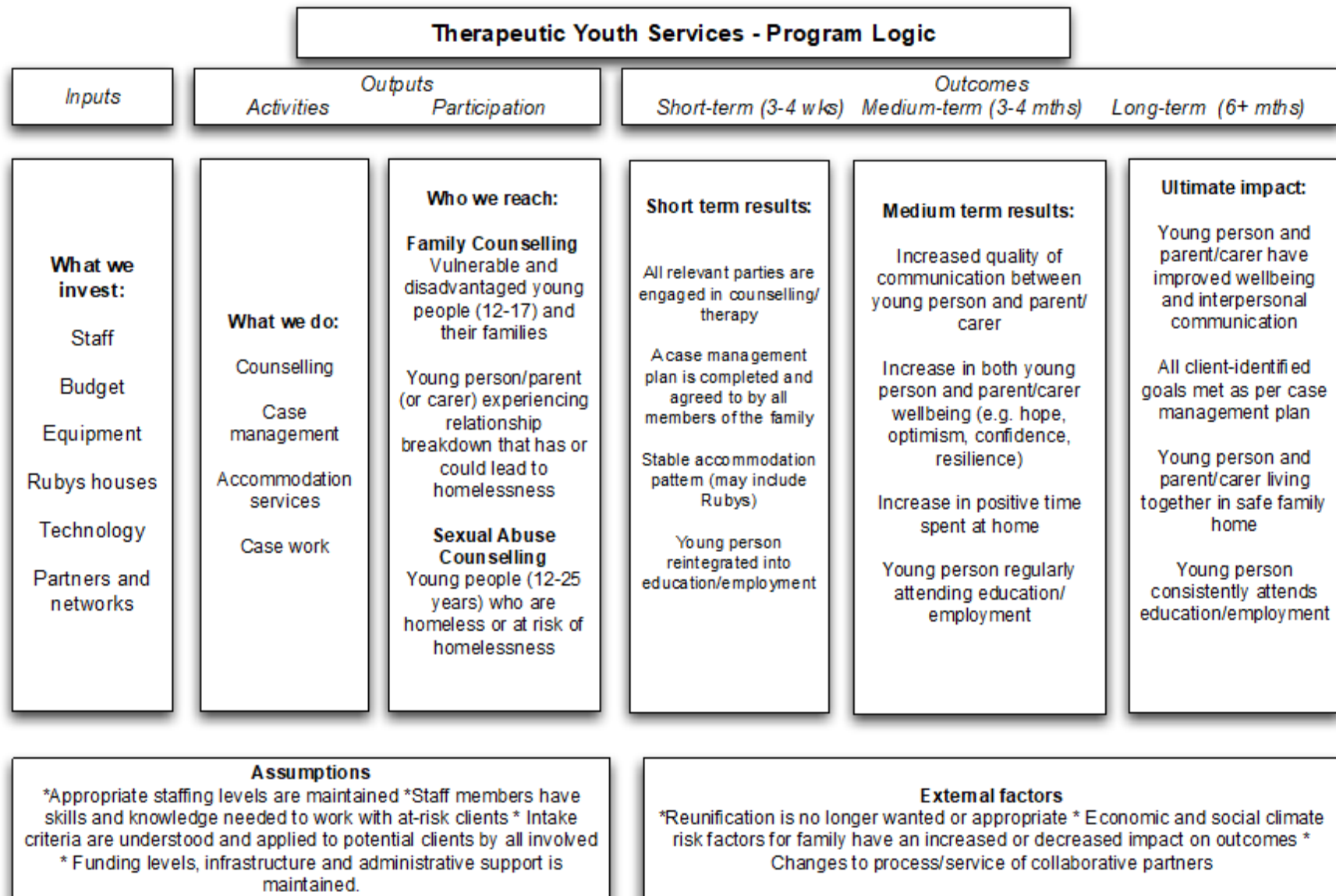- Community perspective on young people

Young people experience long term benefits
- Increase self confidence and positive relationships
- Increase perceived and actual control to practice life skills
- Are socialised into mainstream society
- Are diverted from negative trajectories of crime, alcohol and drug abuse

Local community experiences long term benefits
- Gains capacity to engage disadvantaged young people

Young people benefit from participating in Midnight Basketball
- Rise to meet high expectation learning environment
- Increase social and life skills through explicit and implicit education
- View mainstream future paths as possible and accessible
- Enjoy positive activity during peak periods for anti-social behaviours

VMC and tournament night volunteers benefit from facilitating Midnight Basketball
- Have more positive view of young people and their ability to contribute to the community

A fun, safe and professional 8 week tournament is run
- 6 teams of 10 young people are made up of mixed genders, ages and skill levels – different peer groups interact in a positive setting
- Each team plays 3 games of association basketball each Friday night
- Young people eat a hot nutritious meal
- "No Workshop, No Jump shot" – young people attend workshops focussing on essential life skills
- Friday night service gap is filled from 7:30-12:00pm
- High expectation environment created through code of conduct developed by young people, professional basketball rules, stadium, referees and uniforms
- Volunteers and young people develop trust and respect for one another
- Bus delivers young people home safely at the end of the evening
- Closing ceremony recognises participation and achievement

VMC gains confidence to run MB tournaments over the two year period

VMC and community have capacity to implement Midnight Basketball
- VMC members understand MB philosophy, principles and program model and have the skills to fill one of 8, pre-defined, structured roles
- VMC has viable business plan with tournament-night volunteer recruitment strategy, fundraising strategy, transport home, professional security , hot nutritious meal, workshop plan, recruitment of professional referees
- VMC is contracted by MBA and receives seed funding, support and resources
- A diverse group of community volunteers (min 15) sign up for MBA and pass WWC checks

Young people who would most benefit sign up for Midnight Basketball
A diverse group of marginalised youth sign-up for Midnight Basketball (up to 60)

Comprehensive range of local groups working with marginalised youth identify suitable participants for Midnight Basketball
- Assured that Midnight Basketball will not compete for funding
- Understand who is 'suitable'

Community commits to take on Midnight Basketball
- Community has indoor two-court stadium with attached workshop room and is able to commit to a two year program
- Volunteer Management Committee (VMC) formed from diverse community sectors that represent the collective wisdom of the community – not just the youth sector
- Key local community stakeholders believe that MBA is viable, safe, and addresses their issues (e.g. Mayor, Police Local Area Command, Local Basketball Association)

At least one member of a reputable community organisation wants Midnight Basketball to run in their local community

MBA provides oversight and mentoring of VMC

Necessary Conditions

Marginalised, vulnerable and bored 'at-risk' youth face barriers to learning positive behaviours and gaining opportunities that would break the cycle of disadvantage
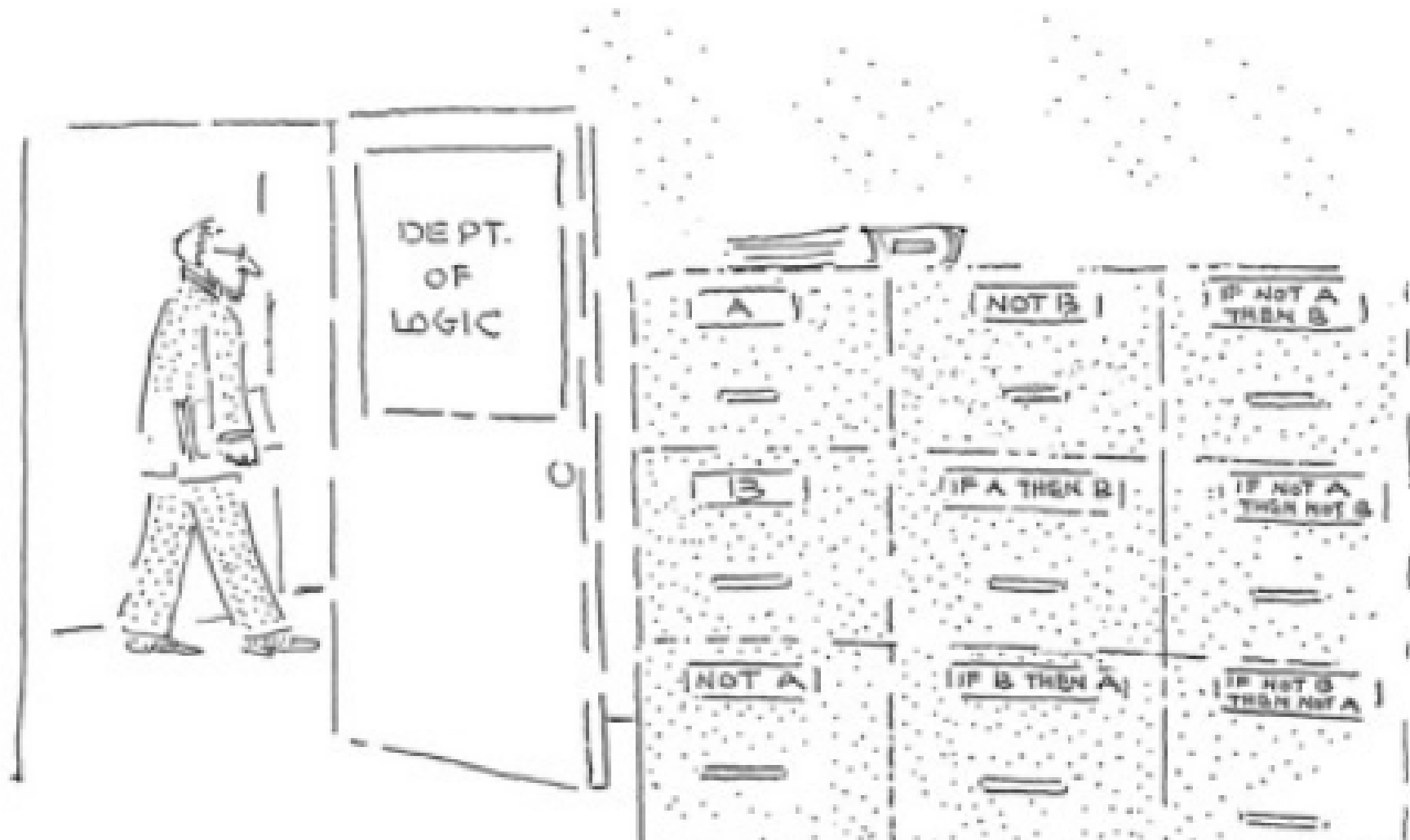
Is this logical?

Therapeutic Youth Services - Program Logic

Inputs	Outputs		Outcomes		
	Activities	Participation	Short-term (3-4 wks)	Medium-term (3-4 mths)	Long-term (6+ mths)

What we invest:

Staff

Budget

Equipment

Rubys houses

Technology

Partners and networks

What we do:

Counselling

Case management

Accommodation services

Case work

Who we reach:

Family Counselling
Vulnerable and disadvantaged young people (12-17) and their families

Young person/parent (or carer) experiencing relationship breakdown that has or could lead to homelessness

Sexual Abuse Counselling
Young people (12-25 years) who are homeless or at risk of homelessness

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Short term results:

All relevant parties are engaged in counselling/ therapy

A case management plan is completed and agreed to by all members of the family

Stable accommodation pattern (may include Rubys)

Young person reintegrated into education/employment

Medium term results:

Increased quality of communication between young person and parent/ carer

Increase in both young person and parent/carer wellbeing (e.g. hope, optimism, confidence, resilience)

Increase in positive time spent at home

Young person regularly attending education/ employment

Ultimate impact:

Young person and parent/carer have improved wellbeing and interpersonal communication

All client-identified goals met as per case management plan

Young person and parent/carer living together in safe family home

Young person consistently attends education/employment

Assumptions
*Appropriate staffing levels are maintained *Staff members have skills and knowledge needed to work with at-risk clients * Intake criteria are understood and applied to potential clients by all involved * Funding levels, infrastructure and administrative support is maintained.

External factors
*Reunification is no longer wanted or appropriate * Economic and social climate risk factors for family have an increased or decreased impact on outcomes * Changes to process/service of collaborative partners

Is your program logic logical?

What is this all about

- My work is mostly with non-evaluator public servants who need an accessible approach to evaluation.
- I have struggled to find a satisfying account of program logic, program theory, theories of change, theories of action in evaluation.
- My conclusion is that while theories are a very important, programs are first and foremost *arguments* about a course of action – not theories.
- A argument consist of a claim and reasons to support that claim.
- A program is an argument that if we do x y will be achieved – this is how ministers and public servants and the general public will evaluate a policy or program. Woundlt it be great to make public policy and programs more accessible to ciizens by increasing the focus on the adequacy of the argument being made?
- These reasons are in the form of facts that become evidence for a claim because of some warrant or justification that allows us to draw the conclusion. In many cases the facts become evidence of something because they align with a certain theory.
- Theory while very important is subordinate to logic. A theory is a special case of a broader category of warrants or reasons to think something might be a good idea.
- Theories are very useful for explaining why different parts of a program are effective, why apples can address vitamin c deficiency, why placing them on peoples desks increases consumption. But there is no usually one theory or a theory of change.
- Theories are best at explaining the nature of a problem, and providing justification for the efficacy of some course of action BUT the course of action itself is better understood as an argument. No need to get stuck on 'T' or 't' theory.
- A program may be understand an argument about cause and effect. I find the most useful way of thinking about causa and effect is to use a configurationlist theory of causality where the program is an INUS condition for a short term outcome.
- On this account a program logic does not display a 'casual chain' but a casual package or recipe as per Nancy Cartwright.
- A program is composed of a series of conditions or outputs that are considered necessary to constitute the program – that if all achieved will be sufficient for bringing about an immediate or short term outcome.
- A sound argument is valid and well-grounded.
- A program is valid if it is considered that if all the conditions came about the outcome would follow with some degree of certainty. We must note the many implicit premises or assumptions that we are also making.
- A program is well-grounded if these premises do come about.
- Program logic and needs analyses can help work out if the argument is valid – often drawing on theories about the way the world is or why certain things work.
- There are different forms of argument structure, in series, parallel and convergent. Program logic can handle all of these.
- Empirical data can help work out if the if the argument is well-grounded
- Analysis can help work out if all components were actually all necessary.
- If the program is sound then the short term outcomes will follow with a reasonable degree of certainty if the outputs were all achieved.
- The extent to which the short term outcomes lead to medium or longer term outcomes is another argument. Here the short term outcome is one premise, program activities may provide additional conditions. External factors will provide the other premises. Here the argument is of the form, if we generate these short term outcomes then given the external conditions we x,y, we expect the program will either contribute towards, or in the stronger sense, be sufficient to acehive Z.

Slides about Evidence Based Policy

Putting evidence in evidence-based policy

- Evidence is always evidence *for* something.
- Evidence is usually something we can observe that gives us a reason to believe something that is harder or not possible to observe
- Facts become evidence for claims through logic and argumentation
- Facts do not support a program, evidence supports a program and evidence is part of an argument for something.
- Program logic when composed of necessary and sufficient conditions provides an argument structure than can be evaluated.

Fact Fact Fact Fact Fact Fact Fact Fact ≠ Evidence

SERIES

PARALLEL

CONVERGENT

EBP