Building Realist Program Theory for Large Complex and Messy Interventions

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Abstract
Program theory, that is, the specific idea about how a program causes the intended or observed outcomes, should be the central aspect of any realist evaluation or synthesis. The methods used for explicating or building initial rough program theories (IRPTs) in realist research are varied and arguably often underreported. In addition, preexisting psychological and sociological theories, at a higher level of abstraction, could be used to a greater extent to inform their development. This article illustrates a method for building IRPTs for use in realist research evaluation and synthesis. This illustration involves showing how the IRPTs were developed in a realist evaluation concerning sexual health services for young people. In this evaluation, a broad framework of abstract theories was constructed early in the process to support IRPT building and frame more specific program theories as they were developed. These abstract theories were selected to support theorizing at macro-, meso-, and microlevels of social structure. This article discusses the benefits of using this method to build initial theories for particular types of interventions that are large, complex, and messy. It also addresses challenges relating to the selection of suitable theories.

Keywords
realist, program theory, sexual health, young people, middle-range theory, adolescents, organizational change, conceptual framework

What Is Already Known?
Methods for developing initial theories in realist research are varied and underreported. Additionally, existing abstract theories are often used to substantiate rather than inform program theory development.

What This Paper Adds?
This paper provides an account of program theory development in a realist evaluation of positive comprehensive youth sexual health services. It offers a rationale for early development of a framework of abstract theories to improve coherence, quality, and transparency in realist research and a set of criteria for selecting abstract theories.

Introduction
The practice of realist evaluation and realist synthesis in social and health sciences is increasing (Marchal, van Belle, van Olmen, Hoeree, & Kegels, 2012; Salter & Kothari, 2014; Tricco et al., 2016). This prompts the need for methodological clarity in the use of such approaches. Notable contributions to support researchers in developing realist inquiries include the Realist And Meta-narrative Evidence Syntheses: Evolving Standards (RAMESES I), (Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013) and II (Wong, Westhorp, Manzano, Greenhalgh, Jagosh, & Greenhalgh, 2016) projects that support realist synthesis and evaluation, respectively. These provide guidance in the form of publication standards, principles of good practice, and critiques of case studies, but they do not provide step-by-step methodological templates or protocols. Indeed, it is suggested that the iterative and cyclical nature of realist research is not suited to such rigid formats (Greenhalgh, Wong, Westhorp, & Pawson, 2011; Jagosh

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et al., 2014). However, we propose that more detailed methodological guidance would support consistent application of realist principles and contribute to transparency of the process.

This article aims to contribute to the discussion on building program theory in realist evaluation or synthesis. In the broadest definition, program theory or theories are the ideas about how the program causes the intended or observed outcomes (Davidoff, Dixon-Woods, Leviton, & Michie, 2015; Funnell & Rogers, 2011). Program theory or theories are central to realist evaluation or synthesis, as they may form the means to providing plausible explanations of why certain interventions work or do not in certain circumstances (Pawson, 2006; Pawson & Tilley, 1997). This article outlines several approaches used by practitioners to make explicit or develop such theories. It then makes a case for the early construction of a broad framework of more abstract theories, in the grand or middle range, to guide program theory development. It is argued that the construction of a “broad conceptual framework,” at an early stage may be particularly useful for realist inquiries concerned with interventions that are large, multifaceted (Westhorp, 2012, 2013) and/or could be described as messy (Sankar, 2011). The type of broad conceptual framework (Imenda, 2014) proposed would be a set of concepts, drawn from established abstract theory, which collectively provide an explanatory framework and a structure within which to develop and situate the initial set of program theories that arise from the data. This is illustrated using an example of initial theory building relating to the delivery of positive youth sexual health services in England.

The article will first introduce the topic that was under investigation. It then presents some key tenets of realism, particularly the central role of program theory. Next, the approach to building program theory used in this research study is described. The article concludes with discussion of the potential benefits this approach offers for evaluations of complex social interventions as well as further challenges that it may present.

**Background**

**Developing Theory for the Delivery of Positive Youth Sexual Health Services**

English and international policy contains an ambition for a positive approach to youth sexual health services, one which prioritizes and promotes young people’s sexual well-being (Faculty of Sexual and Reproductive Healthcare [FSRH], 2015; Great Britain, Department of Health, 2013; World Health Organization [WHO], 2010). However, the dominant model of delivery represents a risk-based, rather than positive approach, focused on treating or preventing sexual ill-health and teenage pregnancy (FSRH, 2015). This is despite support from a wide range of scholars (Patton et al., 2016; Wellings & Johnson, 2013) and advocates for young people (Brook, 2016; Family Planning Association [FPA], 2011) for a positive approach. The WHO (2010) recognizes a need for theory and evidence to support the development of positive, comprehensive youth sexual health services (hereafter positive services). The aim of this research project was therefore to gather evidence and ideas about what works (has worked, could work) to deliver positive services, and for whom, under what circumstances, and why.

**Realist Methodology for Investigating Youth Sexual Health Service Design and Delivery**

Complex interventions are characterized by multiple parts that interact with each other and the political, historical, social, and geographic contexts in which they are situated to produce outcomes (Clark, 2013b). Youth sexual health services can be described as complex interventions because they cover a range of different issues, for example, prevention and management of sexually transmitted infections, preventing unwanted conceptions and psychosexual concerns, are delivered in a range of settings by a variety of clinically and nonclinically trained staff for all young people with their different needs and experiences. Such complexity needs to be reflected in any research evaluating these interventions. Research studies of sexual health interventions must be designed to consider local contexts; experimental designs alone are not sufficient to understand why certain ideas work, or do not, in particular contexts (Michielsen et al., 2016; Santelli & Schalet, 2009). Several scholars have argued that research approaches, rooted in a realist philosophy of science, may support the accrual of knowledge concerning how complex interventions, such as sexual health services, work (Clark, 2013a; Pawson & Tilley, 1997; Westhorp, 2012). Realist approaches are particularly focused on uncovering causal processes rather than simply outcomes and may be most effective when dealing with issues of complexity, that is, where many causal factors interact. This was the case for the project reported here concerning positive sexual health services, hence the choice of a realist approach.

**Two Principles of Realism**

A goal of realist research is to explain causal processes. Causation, according to realist philosophy can be attributed to underlying mechanisms which, triggered under particular contextual conditions, lead to the outcomes we are interested in (Bhaskar, 2008). Mechanisms are often hidden, for example, at the level of human reasoning or social interactions and therefore cannot be directly observed (Sayer, 2000). It follows that we need to use other methods to uncover these mechanisms, the contexts in which they are triggered and the outcomes that ensue; Pawson (2013) summarizes this as the context mechanism outcome (CMO) framework. Given that the mechanisms are not directly observable, the search for them is led by the theories about them; in other words, we look for the operation of CMOs in places that the theories about them guide us to look. For example, sexual health services may be placed in a discrete location because it is assumed that possible embarrassment and shame, associated with sexual health issues, might prevent people attending, if the services were highly visible. We cannot see
the user’s feelings of shame, affecting their decision-making, nor the cultural conditions contributing to these feelings, but our theories about them would direct us to consider these mechanisms in our data collection.

A second principle is that realist research embraces the idea that complexity is inherent in social systems (Westhorp, 2012). Social interventions are always played out in “open” settings where various contextual features at different social strata, such as individual demographics, interpersonal relationships, and political and economic structures, interact affecting the outcome (Clark, 2013a). This is not necessarily a linear relationship, whereby A leads to B, but more like a web of causal processes which, in combination, generate the outcomes (Sayer, 2000). Realist scholars call this web of causal processes leading to an outcome generative causation (Bhaskar, 2008). One of the aims of realist research is to make explicit the ways in which the various contexts interact and affect the outcomes of an intervention via the triggering or inhibiting of key mechanisms (Pawson & Tilley, 1997). Both qualitative and quantitative methods are legitimate tools for extracting, developing, or testing theories that articulate these ideas (Pawson & Tilley, 1997).

Realist research should therefore, and as stated above, be theory-led and use tools that support the analysis of the complexity inherent in the system.

**Program Theories are a Central Aspect of Realist Research**

Pawson and Tilley (1997), in setting out a realist approach to evaluation, argue that the “evaluand” (i.e., the thing evaluated) in such studies should not be the program, intervention, or policy itself, such as would be the case in other evaluative methods, for instance, a randomized-controlled trial, but the causal program theory underpinning it. Broadly speaking, this program theory relates to why and how the program brought about the changes observed. There are some differences in the way in which “program theory” has been conceptualized. This is in part due to the fact that such theories can either represent a highly specific causal explanation or a more abstract explanation. Pawson (2010, 2013), for example, uses program theory somewhat interchangeably with middle-range theory, which is at a higher level of abstraction and can be generalized across different contexts. Other scholars make a distinction between program theory and middle-range or grand theories, by which they mean abstract theories that are not attached to a specific context (Davidoff et al., 2015).

For the purpose of this article, we will refer to program theories in the narrower sense concerning how a specific intervention is theorized to lead to a goal (Davidoff et al., 2015; Funnell & Rogers, 2011). However, these program theories are not free-floating; there are relationships between them and the more abstract theories in the middle-range or grand theories (Walker & Avant, 2005), see Figure 1, which gives a visual representation of these relationships. For example, the more abstract theories can be harnessed to guide the development of program theories by highlighting key concepts and relationships that might be influential (Westhorp, 2012). In turn, testing program theories, in different contexts, has the potential to refine more abstract theories. Thus, effective program theories may well be rooted in one or more abstract theories (Westhorp, 2012).

Accordingly, certain aspects of program theories, which are rooted in more abstract theories, will not be unique to individual settings or interventions but may be commonly applied across a wide range of policy areas (Pawson & Tilley, 1997). Examples are given such as “naming and shaming” theories that operate across criminal justice, health care, and education settings among others. The task of the research practitioner is to identify whether, when, how, and why the abstract theory applies in a particular context. This leads to the central question in their seminal work: “what works, for whom, in what circumstances and why?” (Pawson & Tilley, 1997). The outputs from such a study would ideally be well-articulated program theory to support the development of the intervention in context (Davidoff et al., 2015) as well as new or refined abstract theory, most likely in the middle range, which can be generalized to other settings.

**Adapting Program Theory Building for Large, Complex, and Messy Interventions**

Realist methodology has been applied in a wide range of research studies. Some of these concern interventions which are well defined with distinct boundaries and outcomes against which the project could be evaluated, such as crime reduction programs (Pawson & Tilley, 1997). However, other practitioners have attempted realist evaluations of interventions, including policy reform and system transformation, which are highly complex, large scale, and/or messy (Greenhalgh et al., 2009). The intervention, which is the focus of this article, falls into the latter category because it is looking at system transformation and organizational culture change within publicly funded health services, rather than the discrete addition of a new intervention. In addition, the “program” itself is not a well-defined intervention—more an idea or set of ideas which have been tried, but not in a systematic or uniform way.

Arguably, realist methods need to be adapted to address different research questions (Davis, 2005; Pedersen & Rieper,
Approaches for Developing IRPTs

Strategies for Building IRPTs

Guidance on conducting realist work suggests that the starting point in realist evaluation and realist synthesis is to develop an initial rough theory or set of program theories, henceforth referred to as IRPTs (Wong, 2015; Wong et al., 2016; Wong, Westhorp, et al., 2013). These IRPTs become the object of the inquiry and the structure and framework for examining and synthesizing diverse evidence (Pawson, Greenhalgh, Harvey, & Walshe, 2005; Rycroft-Malone et al., 2012). As projects progress, the IRPTs are frequently revisited, revised, and refined according to new information as it becomes available until ultimately they can be presented as a refined program theory, albeit fallible and partial (Pawson, 2013).

The RAMESES guidance suggests that IRPTs may be elicited from a number of sources (Wong et al., 2016; Wong, Westhorp, et al., 2013). An exploratory review of the literature suggests that, where initial theory building is reported, different approaches are indeed employed. Some use the program theory that is explicit within the program development documentation. For example, Tolson, McIntosh, Loftus, and Cornie (2007), in their evaluation of delivering Managed Clinical Networks, cite program theory used by the Scottish Executive Health Department. This may be possible when interventions are well defined with clear boundaries but less so with messy interventions.

Where there is no explicit program theory, written in policy or service documents, researchers are required to build it (Pawson, 2013). There are various processes for building IRPTs that can be used singly or in conjunction with one another (Lipsey & Pollard, 1989). Four of the possible strategies, used in realist program theory building, are outlined below:

- Using concepts from abstract theories which were used to inform current or comparable interventions. A comparable intervention might be one that is aiming to achieve similar outcomes or one that utilizes a similar change mechanism and therefore may be rooted in a common middle-range theory. For example, Marchal, Dedzo, and Kegels (2010) drew on four distinct theories of human resource management in their evaluation of hospital performance. In this case, the abstract theory or theories were used as a framework for IRPT development.
- Using concepts from abstract theory which are selected purposively for the research synthesis or evaluation by the research team but which have not been referenced in the program literature. For example, Vareilles, Pommier, Kane, Pictet, and Marchal (2015) cite “self-determination theory” which was used as a framework for IRPT development to understand the performance of community health volunteers.
- Extracting tacit theories about what is working and why from interventions on similar topics, reported in the literature (Lhussier, Carr, & Forster, 2016; Pearson et al., 2015). In both of these realist syntheses, the research teams extracted nuggets of data from the literature (in health improvement for traveler communities and collaborative care in offender health, respectively). These nuggets were then accumulated and configured to form a conceptual framework, from which the IRPTs were drawn, without reference to abstract theories.
- Extracting tacit theories (about what is working and why) directly from stakeholders via one-to-one interviews, brainstorming, documentation of the current intervention, and/or developed by the research team who may be embedded in the intervention or use their own experiential or professional knowledge. In this case, data-derived tacit theories are accumulated and configured to form IRPTs. For example, Goicolea, Hurtig, San Sebastian, Vives-Cases, and Marchal (2015) and Goicolea et al. (2013) developed IRPTs about what worked for primary care teams to respond to intimate partner violence using program documentation, one-to-one interviews, and stakeholder workshops.

Building program theory using the latter two strategies, that is, by using data drawn from stakeholders or literature alone, can give rise to problems which we look at below.

Issues Associated with IRPT Development from Data Alone

There are at least three potential issues with data-driven approaches to building IRPTs. First, one may simply discover what is already well established in the theoretical literature and not add substantively to our understanding of the concept, for example, that trust between stakeholders leads to better outcomes. Second, it is reported that data-driven approaches generate an overabundance of candidate theories, which can be overwhelming (Pawson, 2013). A third, related problem is the developing theory may be unstructured, that is, not clearly relatable to levels of social strata (e.g., individual, interpersonal, institutional, and infrastructural; Pawson, 2006), and as a result lack coherence as they will not fully acknowledge the role of mechanisms at these different levels, nor explain the patterns that they form. Arguably, these problems are exacerbated in interventions that are large, complex, and less well defined because there are considerably more aspects of the theory which could be explicated.

In the face of this abundance, RAMESES guidance stresses the importance of prioritizing or focusing the research (Wong et al., 2013). Pawson (2013) suggests a number of strategies, including the use of conceptual platforms, cycles of hypothesis
selection and shedding, focusing on policy discord, or developing lines of inquiry.

Additionally, in explicating the role of different mechanisms at different levels of social structure, Westhorp (2012, 2013) uses the metaphor of climbing up and down ladders. The ladder rungs refer to different levels of social strata. These may have corresponding layers of theory: micro (relating to individual), meso (relating to interpersonal), and macro (relating to institutional, infrastructural, and cultural).

It has been argued that a sound understanding of a broader, more abstract conceptual framework, incorporating theories that relate to different layers of social structure, may help to overcome each of the three highlighted issues (Westhorp, 2012). It may also direct and frame a more detailed analysis of causal explanation (Westhorp, 2012). The rationale for this is further developed below.

The Case for a Conceptual Framework of Abstract Theories to Inform IRPT Development

It is the central thesis of this article that an initial conceptual framework of abstract theory could be a valuable asset for formative assessments of large, complex, and messy interventions. This framework, if informed by theory at different levels of social strata, may provide a number of benefits. First, it can highlight common features and relations that are likely to play a role in the program theory, and second, it can provide a structure within which to situate more detailed analysis. This marries with Salter and Kothari’s (2014) suggestion that a conceptual framework may, in general, facilitate the identification of important relationships between concepts. The method for developing one such framework and its contribution to IRPT building is outlined below.

Building IRPTs for the Delivery of Positive Youth Sexual Health Services

The following sections will describe three main phases of IRPT development: concept defining, proposition development, which includes the development of the conceptual framework introduced above, and theory development. While these are described sequentially, in practice, there was some degree of overlap across the phases. Overlapping methods and research phases are commonplace in realist projects, where aspects of the theory are iteratively enveloped with data and where emerging findings may direct the researcher to return to previously examined literature (Wong, 2015). The phases are described in detail below, alongside illustrative examples of the IRPT in development.

Phase 1: Concept Defining

Any program theory is made up of concepts, which define the fundamental characteristics of the program in question (Walker & Avant, 2005). Realist methodology calls for explication of concepts and strives for clarity where they are contested. An essential first step of theory building is therefore to articulate the concepts and shared or contested understanding of the program under review such as “what the program is?”; “who is the supposed target?”; and “what is the supposed outcome?” (Pedersen & Rieper, 2008).

A process of concept mining (Rycroft-Malone et al., 2012) and refining was adopted in this project, not least because the concept of “positive approaches to youth sexual health” has no set definition. This process had a number of stages as detailed below.

Concepts, constructs, and definitions of positive approaches to youth sexual health services were identified through a systematic search of four electronic databases using the search terms “sexuality” and “sex education” in combination with “sex positive,” “young people,” “service,” and other synonyms (for details, see Shearn, Piercy, Allmark, & Hirst, 2016). More specific inclusion and exclusion criteria were then applied to identify articles that related to universal youth sexual health provision, developed countries, written in English. Of 1,162 articles, three services meeting the inclusion criteria were reported in the literature. Reference, citation, and gray literature searches resulted in 25 sources concerning the development and evaluation of these services. Data referring to the overarching aim, outcomes of interest, characteristics, and principles were extracted. These were then synthesized, and principles and characteristics distinguishing positive approaches from other models of care were identified. In brief, these principles were first, an acknowledgement that young people had a sexual identity and rights associated with this; second, a desire to support young people to achieve sexual well-being and recognition that this is influenced by individual, interpersonal, and societal factors; and third, a commitment to place young people’s needs, as opposed to political, professional, or societal needs, at the center of decision-making. We then investigated the extent to which these principles and characteristics were present in current policy, to refine our definition of positive youth sexual health services. This definition was then verified via a group of multiagency practitioners and researchers in sexual health.

The output of this stage was a provisional definition of positive youth sexual health services which described its principles, characteristics, and the organizational outcomes associated with such an approach and initial data regarding how such outcomes might accrue. The process of concept mining, however, alerted us to the fact that many possible interpretations of positive services exist, for example, as a marker of quality overlaying a clinically orientated service or as a reorientation of services to help young people achieve sexual well-being. These contested concepts were therefore incorporated into our initial theories as possible contexts leading to unintended outcomes.

Phase 2: Proposition Development

Using a framework of existing abstract theories. The next stage of realist theory development was to develop realist statements or
propositions explaining how a positive approach might be brought about. This involved specifying the antecedent concepts leading to the concepts identified in Phase 1, for example, to consider commissioners’, managers’, and practitioners’ role, background, knowledge, values, and skills and the structural and cultural factors conditioning them (Walker & Avant, 2005). As highlighted above, there is no set protocol for developing such propositions, and indeed, a variety of approaches are recommended (Wong, Westhorp, Pawson, & Greenhalgh, 2013) and undertaken in practice.

As indicated above, initial pilot interrogations of the literature demonstrated that the “intervention” was not well established or well defined. This meant that there were no immediate contenders for program theories of action or theories of change that could be extracted from the program documentation or through searching academic databases. Additionally, a purely data-driven approach based solely on practitioners’ lay theories to develop an IRPT would run the risk of raising limitless theoretical nuggets without a clear picture of how to bring them together and prioritize between them. Instead, we began by building a broad framework of social, organizational, and individual change middle-range theories that may reflect similar processes of service transformation to positive youth sexual health services.

In line with Westhorp (2012, 2013), the conceptual framework was intended to support the consideration of social structure and the multiple layers of overlapping context (as mentioned earlier: individual, interpersonal, institutional, infrastructural, and cultural; Pawson, 2006) by looking for micro-, meso-, and macrolevel theories. Given the evolution of cultural attitudes toward sexual health and the influence these have on services design (Herzog, 2009), the conceptual framework was also designed to support theorizing about changes over time.

Selecting existing theory on the basis of explanatory power. Initially, we asked ourselves the question “what is this intervention an example of?” This gave the more abstract, general answer: “the adoption of a new, potentially controversial, model of service delivery.” A purposive search for middle-range theories to support an understanding of what might work to deliver this type of change was undertaken. An initial short list of 15 theories was established by drawing on the work of scholars in the field of sexual health, other realist scholars looking at similar service transformation and our own expertise in psychological and sociological fields.

The short-listed theories were then appraised according to four criteria:

- Their simplicity—how readily they inspired theory generation.
- Their compatibility with realist notions of causation, that is, the extent to which they offered guidance for articulating underlying causal processes building on Westhorp’s (2012) notion of complexity consistency theory. For example, these theories would address some of the following: the constituent elements of the system, interactions within and between levels of a system, and the properties that may result in one level of the system as a consequence of the interactions at other levels (Westhorp, 2012).

Three theories were selected from the short list which best fit the criteria. Each operated at a different level of social structure. These were the morphogenetic approach (MA; Archer, 1995), normalization process theory (NPT; May & Finch, 2009), and the capability, opportunity, motivation model of behavior change (COM-B; Michie, van Stralen, & West, 2011).

At a macrolevel, Archer’s (1995) MA provides a realist perspective of how structure, culture, and agents interact. Her approach describes the ways in which agents are conditioned by structure and culture to behave or react in certain ways, and hence, our choices are constrained. How agents choose to act then reproduces or transforms the social structures/culture. This theory contributed to our thinking around the overall process of change but also the role of agents within the system and the effect of time and sequencing of events.

At the mesolevel, NPT describes how organizations change to adopt new practices. May and Finch (2009) propose that normalization “work,” by which they mean “what people do,” concerns four broad constructs: (i) coherence—work that defines and organizes objects of a material practice, (ii) cognitive participation—work relating to actors within the system engaging with the change, (iii) collective action—work relating to all parts of the system working toward the same goal, and (iv) reflective monitoring—work relating to assessing patterns of work and outcomes. This theory has clear applicability to the current project aims, which is looking at the adoption of a new model of practice.

At the microlevel, Michie, van Stralen, and West (2011) assessed a wide range of behavior change theories and distilled them to three key factors they suggest are necessary for individual change: COM-B.

The three theories, Archer’s (1995) MA, May and Finch’s (2009) NPT, and Michie et al.’s (2011) COM-B, were assimilated to form an overarching conceptual framework. This framework was used to guide and inspire our program theory development and subsequent data collection and to frame the analysis. Figure 2 below depicts the simplified framework, in which theories are positioned in relation to macro-, meso-, and microlayers of the social system.

Using the conceptual framework to build theory propositions. The next step was to use the conceptual framework to inspire the
development of program theory propositions, for example, to connect concepts that might explain local buy-in to positive approaches. A series of explanations for the underlying causal processes leading toward local buy-in were postulated using the conceptual framework and information from the concept defining stage. Explanations were derived by iteratively hypothesizing about how the step might be achieved based on a theoretical understanding of (i) how it has been achieved in other circumstances (retroduction) and (ii) developing hypotheses on the basis of data which are not explained by current theories (abduction; Oh, 2014). This exercise gave rise to a number of theory propositions. One example is given below. Summarized, in prose, this is that when commissioners, managers, and practitioners, who intend to embed a positive approach in their work, share an understanding of positive principles and characteristics with other local decision makers and pursue the same goals, they will be motivated to work together as this will enhance their chances of success.

Table 1 below illustrates which aspects of the proposition are supported by the conceptual framework and data (gleaned to that point).

Other propositions supporting change relating to “conviction,” “integration with other contextual features,” “consistent policy,” “evidence-based practice,” “devolved decision-making,” “young people’s voice at the center of decision-making,” and those hindering change relating to “tension between practice requirements” and “professional silos,” were also identified and explained using this approach.

Phase 3: Connecting Propositions to Form Theories

The final stage of developing the IRPT was to draw the connections between the theory propositions. As Pawson (2006) notes, it is the combination of attributes, the fact that they happen together in a process over time, which provides the trigger for system transformation.

Figure 2. Conceptual framework of theories.

Table 1. Proposition Development and Sources.

| Proposition                                                                 | Data | MA | NPT | COM-B |
|----------------------------------------------------------------------------|------|----|-----|-------|
| When commissioners, managers, and practitioners, who intend to embed a    | *    | *  | *   | *     |
| positive approach in their work share an understanding of positive        |      |    |     |       |
| principles and characteristics with other local decision makers           |      |    |     |       |
| and pursue the same goals, they will be motivated to work together as this | *    | *  |     | *     |
| will enhance their chances of success                                     |      |    |     |       |

Note. COM-B = capability, opportunity, motivation model of behavior change; MA = morphogenetic approach; NPT = normalization process theory.

Figure 3 below illustrates the relationships between some of the theory propositions. Some were viewed as contextual features, representing social phenomena at macro-, meso-, and microlevels. These propositions were thus arranged to illustrate how they might condition local, individual, and group responses. Other propositions were viewed as possible outcomes or causal processes that might be triggered as a result of such responses within a long implementation chain which serves to transform services. Positioning these theories within a web of causation allowed for a rich picture to develop but also highlighted gaps in the overall theory. Hypotheses were formed about the gaps using the abductive and retroductive inferences, in much the same way as the original propositions.

The theories are presented as relatively linear and sequential below, for the sake of clarity. It is, however, a representation of a more complicated picture where aspects of the theory compound or conflict with one another and where feedback loops reinforce or reduce their influence. For example, young people’s voices, demanding a positive approach, may be directly
heard within the organization through engagement strategies and indirectly heard through increasing practitioners’ conviction in a positive approach.

The resulting IRPT (or collection of theories) can be summarized as follows. In circumstances where there are multiple and competing influences on optimal service design, but some degree of autonomy in local settings, individuals with a clear understanding of positive services (differentiated from other models of care), conviction in their efficacy for reducing youth sexual ill health, and a sufficient degree of influence within the organization may be able to instigate a positive approach by positioning it as the most effective means for reaching mandated service requirements. A model of positive services may be sustained if local agencies share principles and values and work toward common aims and if suitable evidence is collected to support it.

Each of the propositions held within this could be further unlocked and interrogated by asking “when?” “why?” “how?” “who?” and “in what circumstances?” These are the questions that can be posed directly in future data collection initiatives.

**Summary**

In the case of gathering evidence and ideas to build a program theory for delivering positive services, we found that three phases of theory development were required: concept, proposition, and theory development (Walker & Avant, 2005). These phases were important as the program under question was not a coherent intervention, and the purpose of the study was to develop ideas about what the intervention was and how it came to be operationalized. Concept development was supported by immersion in both youth sexual health service and realist literature. Proposition development was enabled through the development and application of a conceptual framework of middle-range theories at different levels of social strata. Theory development, where links and relationships between the propositions were drawn, was undertaken through abductive and retroductive reasoning with references to the conceptual framework.

The development of the conceptual framework supported the building of the IRPT in several important ways. Firstly, it framed the overall process of organizational change, from one status to another via the theory of social morphogenesis. Secondly, it provided a scaffold for climbing up and down the levels of abstraction and zooming in and out of the layers of social structure (Westhorp, 2012, 2013). This supported an understanding of the emergent nature of organizational change. As part of a realist project, this then guided the search for underlying generative social causal mechanisms.
Discussion

Other accounts have referenced the use of a framework of substantive theories which informed the initial stages of theory development (Herepath, Kitchener, & Waring, 2015; Westhorp, 2013). What we have added here is a detailed account of how this framework can be used, in conjunction with initial data, to inspire the development of initial theory propositions.

In developing complexity-consistent theory, Westhorp (2012) advocates a similar approach of layered substantive theories in a “theory ladder.” Her example demonstrates proposed direct linkages between the theories across the different layers. We found that the theories did not need to be directly aligned to inspire initial program theory development. In fact, given that the task is to interrogate underlying causal processes, having theories that did not perfectly align allowed us to consider alternative explanations which further empirical work would seek to test and adjudicate between (Pawson, 2013).

Purposively, building an initial conceptual framework of abstract theories is not without its challenges. Firstly, there is a wide range of theories to choose from. A working knowledge of middle-range and grand theories would be a valuable asset prior to beginning work on a realist project. Theories in this current project were identified from a range of sources, but there may have been others that would have served the project better. Systematic approaches to searching for abstract theory have been suggested, for example, using the Behaviour of interest; Health context; Exclusions; Models or Theories (BeHeMOTH) template (Booth & Carroll, 2015), although the extent to which this technique can be applied to realist projects concerning large, complex, and messy interventions is as yet unclear. As such, the identification of relevant theories currently remains dependent on the researcher or research team’s knowledge and deployment of a wide range of strategies.

Judging the utility of existing theory may also be problematic. At present, we know of no criteria available for assessing whether an existing theory is suitable or not for developing a realist program theory. Westhorp (2012) suggests characteristics which complexity-sensitive theories would feature. Furthermore, we were concerned with selecting theory that would be of practical use as a tool to inspire theory building. Hence, we developed criteria as part of this project to justify the selection of the theories we used. These criteria were that the theories were at an appropriate level of abstraction with regard to social structure, fitted with the topic, were simple, could be easily utilized to inspire program theory development, and were compatible with realist principles. If abstract theories are to be used more widely in developing initial program theory, then justifying the selection of one theory over another will become an important aspect of study development. Further work, perhaps building on these initial criteria is needed to test them in other contexts and to refine and develop them.

As the project continues, the broad conceptual framework may inform the sample design, data collection, and analysis of data although its role in these tasks is beyond the scope of this article. It is also possible that as the program theories become more refined, the initial conceptual framework may recede into the background and additional middle-range theory be utilized to explain the more granular-level causal processes that emerge as central to the outcome patterns that occur. Nonetheless, in support of the general ambition that evaluators build on each other’s work and accumulate a body of knowledge around program implementation and program theory, setting the detailed granular analysis within a general conceptual model of change should assist translation and aid transferability. We believe that this and other similarly detailed accounts would help increase transparency of realist work. Additionally, given the newly emerging nature of realist methodology, it would appear that support, in the form of a framework, or scaffold to assist in the process of theory building, as opposed to a template or protocol, would be a useful tool for realist practitioners to access. This article puts forward a rationale for using existing abstract theories, in combination, close to the outset of a project to frame and guide the development of IRPT. We suggest that this is a useful strategy for supporting stand-alone projects, particularly of large, complex, and less well-defined interventions. We believe it is also directly in keeping with Ray Pawson’s (2013) manifesto aim to build a body of knowledge on realist principles and support future researchers’ aims to synthesize the realist program theories in the future.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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