Faculty of Design

2021

Balancing Acceleration and Systemic Impact: Finding leverage for transformation in SDG change strategies

Murphy, Ryan J. A., Rava, Nenad and Jones, Peter

Balancing acceleration and systemic impact

Finding leverage for transformation in SDG change strategies

Murphy, Ryan J. A.; Rava, Nenad; Jones, Peter H.

Acceleration increases the rate of progress toward system transformation.Systemic outcomes are durable impacts from coordinating foundational changes. We studied the form, leverage, quality, and effectiveness of theories of change in the 35 Joint Programmes of the UN's Joint SDG Fund. We conducted four analyses on programme strategies: (1) Classified types of Theories of Change, (2) Analyzed cases to identify the most effective JP Theories of Change; (3) Defined how leverage could accelerate the SDGs and their targets for social protection; (4) Analyzed cases to show leverage in the JP's change strategies. We argue that programmes with systemic theories of change and that show effective leverage will be more effective in accelerating achievement of social protection. We advise designers of complex change strategies adopting these systemic design tools to formulate strategies for systems-level change. Our analyses identified important tensions in the pursuit of acceleration. While goal acceleration is a means to an end, acceleration can become the goal; we must balance by design for long-term systemic impact. These desiderata are relevant to large-scale transformation contexts such as SDG programmes, climate change strategies, and other contexts where leverage can both accelerate and reach systemic program goals.

Keywords: acceleration, systemic change, strategies, leverage, sustainable development goals (SDGs)

Introduction

The Sustainable Development Goals (SDGs) were adopted by the United Nations (UN) General Assembly in 2015. The concept of the SDGs is to hold a platform of comprehensive, universal, worldwide shared goals (to be implemented by all countries, including the so-called developed ones from the global North). This includes 17 interlinked goals as a part of "a plan of action for people, planet, and prosperity" (United Nations, 2015, p. 1) to be implemented by 2030. Nearly half the timeframe determined to achieve these goals has elapsed since the SDGs were adopted—and yet, progress to date has been insufficient (United Nations, 2021).

The SDGs are a hallmark example of the scope and scale of challenges that the discipline of systemic design may help address. This study presents a systemic design analysis of the portfolio of 35 programmes in the Joint SDG Fund (https://www.jointsdgfund.org). We analysed the programmes' theories of change and leverage to assess the potential for acceleration with catalytic effects, i.e. to produce change across sectors and social systems. We provide an overview of acceleration in the contexts of systemic theories of change and leverage analysis. We then introduce the Joint SDG Fund and its programmes, with an overview of methods used in our analyses. Last, we summarize our results and discuss their implications for SDG target achievement, acceleration of systemic change, and tensions that systemic design may address in complex change programmes.

Towards Systemic Acceleration of the SDGs

In systemic change, acceleration is defined as the identification and use of catalytic initiatives to multiply the speed of progress towards a desired change goal (United Nations, 2017). In 2017, the UN Development Programme published a guide to pursuing acceleration—the Accelerator and Bottleneck Assessment (ABA) tool—with five steps: (1) identify accelerators that enable progress across the SDGs, (2) identify interventions that drive

progress on these accelerators, (3) identify bottlenecks to acceleration, (4) identify solutions to these bottlenecks, and (5) implement and monitor these solutions (UN, 2017).

The ABA tool provides a straightforward guide to identify high-yield actions for complex change programmes. The process defined in the tool is somewhat systemic. The authors suggest that designers identify multiple catalytic accelerators that facilitate progress on different parts of the change programme, then identify interventions that act on multiple accelerators (UN, 2017). By identifying these chains of interventions, programme designers can develop theories of change well-positioned to accelerate progress on multiple goals.

The ABA tool approach, however, does not use the structure of the system at hand to inform the selection of accelerators. In this work, we sought to demonstrate the use of systemic design (specifically the technique of leverage analysis; Murphy & Jones, 2020b; Murphy & Jones, 2018) to identify strategies for *systemic* acceleration in the Joint SDG Fund programmes. Leverage analysis is an approach to investigating systems for key strategic features, such as leverage points and bottlenecks. A leverage point is a phenomenon which, if changed, changes a relatively large change throughout the rest of the system (Meadows, 1997). In turn, leverage points are key to the acceleration of systemic change, such as achieving progress on the SDGs. Conversely, a systemic bottleneck is a phenomenon through which many other changes in the system must pass. It is important to consider both types of phenomena in a transformation strategy. As we argue, programmes designed to address both functions will maximize their potential for accelerating change across the whole system.

Towards Systemic Approaches to Theories of Change

Theories of Change (ToCs) articulate the assumptions and logic of a change programme (Funnell & Rogers, 2011). ToCs are typically represented by a log model (commonly called a "logframe"): a visual flowchart of how planned actions affect objectives and outcomes, which eventually lead to an ultimate impact the intervention aims to create. When done well, they provide a variety of valuable functions. For instance, they render visible the mental model of change initiatives, allowing all stakeholders to see themselves in the work. They encourage change designers to articulate, challenge, and test the assumptions at the core of their initiatives. They provide a clear set of waypoints or measures that can be used in monitoring and evaluation efforts. By providing a simple way of communicating these aspects of the complexity involved in change work, ToCs have become common in social innovation and philanthropy (Jones & Murphy,2021; Murphy & Jones, 2020c).

In recent work, however, we have criticized conventional theories of change (Jones & Murphy,2021; Jones, 2020; Murphy & Jones, 2020c; Murphy & Jones, 2020a). As described above, ToCs are often represented as models of one-way change pathways. While ToCs are usually developed to address complex issues, they usually fail to capture the feedbacks, side effects, and other systems structures common to complex systems. We propose alternative approaches to ToCs that account for these ideas that are so crucial to systemic change. In this work, we examined the ToCs embedded in the Joint SDG Fund's portfolio of programmes, clustering the ToCs into categories and comparing these groups to qualify their potential for systemic acceleration.

Study and Methods

Context: The UN Joint SDG Fund

The UN Joint SDG Fund was launched as a global, multi-sectoral vehicle for policy innovation and financing for acceleration of the progress on the SDGs and the 2030 Agenda for Sustainable Development (https://www.jointsdgfund.org). Its core mandate is to invest in solutions that produce transformative results that catalyze change across systems, sectors, and industries. The Joint SDG Fund aims to facilitate the design of policy innovations for accelerating progress on specific SDGs (Rava, 2019). The Fund is led by the Deputy Secretary-General and managed by an inter-agency UN committee.

The first portfolio of the Joint SDG Fund (https://www.jointsdgfund.org/integrated-social-protection) was launched in 2020 with the overall investment of USD 102 million over two years. It includes 35 Joint Programmes (JPs) in 39 countries that are implemented with stakeholder collaboration across more than 11 sectors, and with the involvement of more than 600 partners (including national and local governments). The JPs are expected to deliver transformative results at scale by innovating over 100 policies through systemic approach. They intend to accelerate the progress across 53 SDG targets and produce new solutions in the space of social protection of the most vulnerable, i.e. solutions that "leave no one behind" (LNOB; 2018; Rava & Kurbiel, 2020).

In this work, we analyzed 35 full JP documents, 35 annual reports, and mid-term reviews of the portfolio. The JP documents contain extensive descriptions of strategy, expected results, and plans. The mid-term and annual reports document the progress from the first year of implementation and plans for the second, and final, year.

Analysis and Results

Theory of Change Typology

Each JP included their Theory of Change (ToC) in their initial proposals, visualizing the proposed actions of the JP within the structure of their strategies for change. An analysis table was structured using the SDG JP's data and categories, which included the following information:

Table 1. Analysis table of the Joint Programme Theories of Change.

Country, Program Title, Country size/geography (for clustering)	
Description, Approach, Target Groups, UN Agencies involved, Priority SDGs	
Theory of Change Model type	One of 4 types (including "other)
Assumptions & Leverage	Quality of & reference to assumptions Indication of leverage in any actions / outcomes (Y/N)
ToC fit to SDGs	Whether the ToC references the SDG / targets in the model

The coding for this assessment was made by identifying a limited number of criteria for each JP, by analysing the ToC models included in the original JP documents.

All 35 programmes were reviewed from the perspective of their descriptions of ToCs. The first assessment was to determine and categorize by the type of ToC. The working theory associated with this analysis is that more complex, deeply-reasoned Theories of Change would be associated with higher complexity programmes, that recognized the necessity for considering multiple dimensions and factors in the change programme, and that these factors might be reflected in their performance. In short, we might expect better-quality ToCs to be associated with either a) higher complexity conditions than most and/or b) better performance due to the recognition of systemic and reinforcing factors in the programme's social environment.

Theory of Change Typology

The simple analysis at this stage only took into consideration the ToC format. We did not analyse actual content or internal dynamics (i.e., the relative quality of relationships between an action to output to outcome). However, even such a top-level analysis has never been completed to our knowledge, with a set of strategy models associated with major change programmes. There are several leading theory of change advisors that publish ideas and developments, but their primary emphasis is on strategic communication to donors, and not analysis addressing more complex systemic logic. There is usually an attempt to simplify the ToC so that it can be used for programme communication and evaluation purposes. This purpose must be considered in our context as well.

Four Sensemaking Logics of Transformation

While we continue to explore the literature and study the various formats that represent ToCs, there are four models to which most ToCs can be assigned:

1. **Action–Outcome**
2. **Influence Pathways**
3. **Complexity Process**
4. **Movement Coordination**

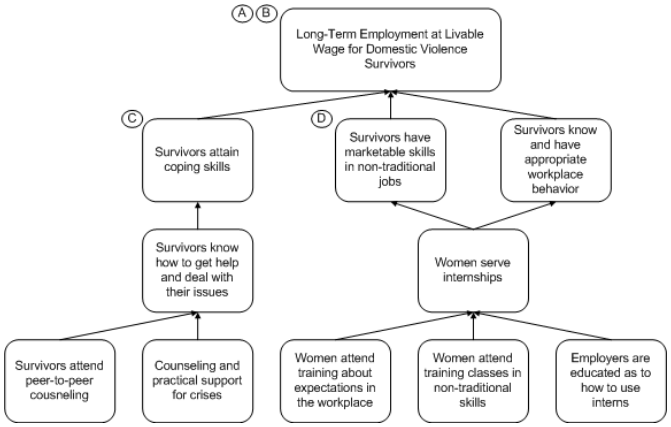

Figure 1. An example of an Action–Outcome model.

The **Action–Outcome Model** includes the classic logframe, but not all Action-Outcomes are logframes.The standard ToC model is presented as a series of stages and directed links (arcs) between action steps and the proposed outcomes of actions toward change.

- Simple steps
- Communicates clearly
- Can be linear yet systemic
- Forward or back-logic

A distinguishing feature of most standard logframes is a series of stages of different types of activities or effects. These are typically located from the bottom-up in the order from most foundational and initial (assumptions), and near-term (actions) to the later-stage outcomes and impacts.

- Assumptions
- Actions or Activities
- Outputs or Results
- Outcomes or Effects
- Final Result or Impacts

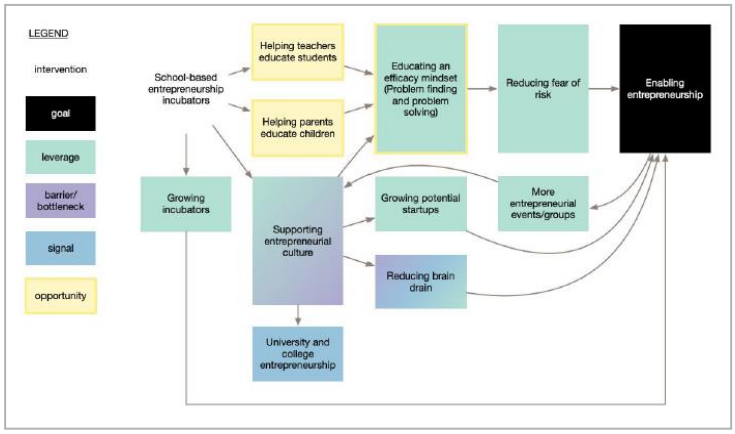

Figure 2. An example of an Influence Pathways model.

The **Influence Pathways Model** uses directed arcs to indicate pathways of reinforcing action or influence on successive actions. The main visual difference from Action-Outcome is the lack of formal stages, but instead using a more freely-connected set of relations similar to complex system models. The influence pathways enables a more systemic (complex) network of relations, but is not systematic in the sense of structured forms as the logframe. Characteristics include:

- Simple formalism of boxes and arrows
- Directed graphs are meaningful influences

- Can show influence networks, or cycles (reinforcing sets) or loops
- Supports progressive abductive reasoning or identifying leverage
- Forward logic based on relational mapping, i.e. “progress on A influences significant progress on B”

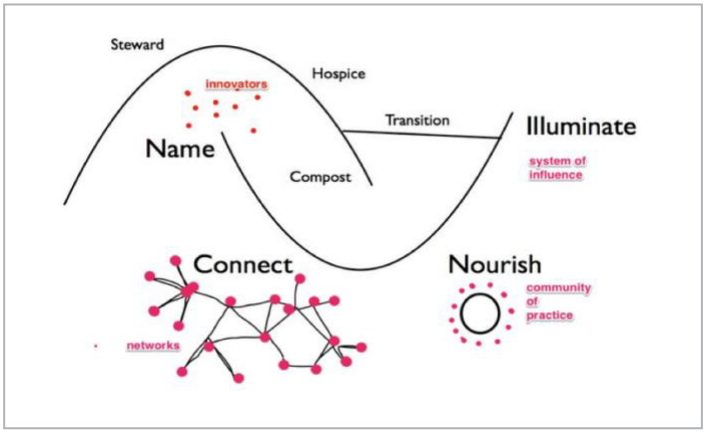

Figure 3. An Illustration of the Complexity Process model.

A **Complexity Process Model** shows a more fluid of pictorial theory of change that describes the process of change within a complex environment. We can consider these models “complex ToCs within a complex field.” In most cases these are hybrid graphic models, using iconic imagery and directionality to present an abstract model of change in a complex system.

The well-known Berkana[1] ToC is considered a complexity model, showing an existing complex system (the down-turning curve) is displaced by the upturning curve of a new system.These are complex, nonlinear processes with unpredictable outcomes, yet the processes are considered viable to due the coordination of synergistic resources toward an intended telos, or direction.

While there are no standard formalisms in a complexity model, the distinctions include:

- Representations of different external system factors
- Some depiction of complex interactions, or conflicts, representing barriers to change to overcome
- Indications of complex system dynamics or interactions, whether using system models (e.g. the Panarchy adaptive cycle) or freehand graphic representations (such as in a Rich Picture).

The **Movement Coordination**, as suggested by the label is a theory of change model that represents a network of related change initiatives as social movements. The ToC is based on many movements reinforcing one another, as represented in this example from the McConnell Foundation. The Movement style is more relevant to within-country and regional social change projects, for programs working with NGO coordination, organic social change projects led by citizens, and supported by social philanthropy.

[1] The Berkana “Two Loop” theory of change was formulated with Meg Wheatley and Berkana Institute, and has been adopted by many programs as a complex yet natural model process change. https://stream.syscoi.com/2018/02/28/our-theory-of-change-the-berkana-institute/

Figure 4. An example of a Movement Coordination model.

We can also identify in the sample at least one simple logic, or even "no apparent" logic that merely indicates the proposals of activities within a JP.

Programme Analysis

A summary analysis of ten joint program ToCs was conducted to assess the potential performance improvement of ToCs. A rapid evaluation of the ToCs across all 35 JP plans, clustered the models by categories that represent the degree to which significant attributes of complexity reasoning are apparent.

Selection of Sample Joint Programs

Ten joint programs were identified to represent a range of types, of social protection approaches, and performance outcomes. All had significantly different contexts and initial conditions, that might influence the effectiveness of a given ToC approach, as well as performance to plan.

Model Clustering

A clustering analysis of the total set of 35 JP models sorted out the set according to a) a determination of the general *type* of ToC (whether a traditional logframe or a systemic or atypical type) and b) their categorization according to the four ToC *models* based on system logic, noted above.

Number of ToCs by Type

The types were determined by characterizing elements of the ToCs from their descriptions.

- 20 Standard Logframe or logic model
- 5 Graphic Logframes
- 7 Systemic types (one of the three systemic models defined above)
- 3 Other (custom or indeterminate)

Number of ToCs by System Models

The models were determined by clustering the ToCs according to the systemic logic represented by the JP descriptions. In most cases, the standard logframes are directly defined as Action-Outcome. The "Weak A-O" are traditional logic models with poor inter-model linking characteristics. The Influence Pathways and Complexity models were the most "systemic" of the ToCs,

- 20 Action-Outcome
- 3 "Weak A-O"
- 4 Influence Pathways
- 3 Complexity Process
- 5 Simple, or no apparent logic

- o Movement coordination

The purpose of this classification was to identify the best candidates for further analysis of effectiveness or correspondence to outcome based on the assessed reasoning and representation of complexity in the Theory of Change.

Standard Logframe Type

Most of the Joint Program theories of change were conventional change logic models, presented in a framework known as the logframe (logic framework). These are tables showing, from bottom-up: Activities, Outputs, Outcomes, to Goal.The Goal state was often the SDGs or targets proposed in the plan.

Theory of Leverage for the UN Joint SDG Fund Portfolio of Joint Programmes

We sought to understand the Joint SDG Fund's JPs as a system of targets. Discovering the structure of this system will illustrate how the Joint SDG Fund's SDG accelerates the SDGs as a whole. Additionally, exploring this system's features—especially its leverage points and bottlenecks—may provide some insights useful in future planning and programme design.

We first adopted a baseline logical framework for Social Protection. This framework establishes an initial causal structure for the JPs and their selected targets. The chosen framework was first used in the Joint SDG Fund's 2019 Annual Report, "Setting the Foundations." (https://www.jointsdgfund.org/article/setting-foundations-2019-progress-report)

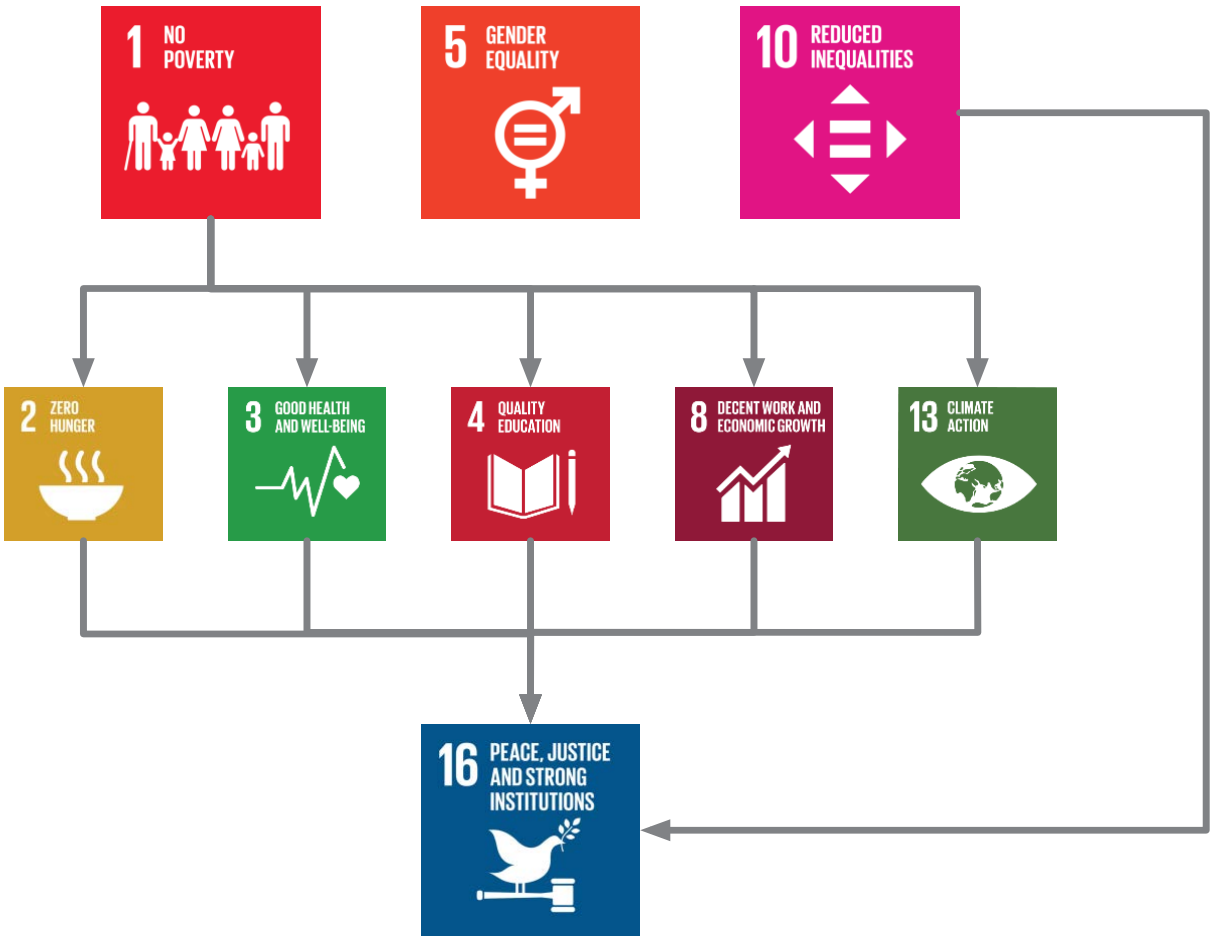

Figure 5. The baseline logical framework for Social Protection used in this study.

Modelling the SDGs and their Targets

The online systems modelling software Kumu (https://kumu.io) was used to create an interactive data-driven models of the SDGs and targets[2]. The baseline framework was modelled in Kumu as an influence diagram, making connections between the goals according to the arrows in the framework.

Modelling JPs Target selection

Next, we used the initial proposals from each JP to identify the priority targets each country selected for their overall strategy. These selections represent the targets and—by proxy, the SDGs—that each country sought to accelerate through the JP. Each of these Targets was added to the Kumu model and causally connected to the appropriate goal. Metadata was added to targets to indicate which countries chose them as overall priorities.

Establishing causal complexity

To appreciate the complex causal structure of Goals and Targets, we drew on Le Blanc (2015). We adapted Le Blanc's model by drawing connections from Targets selected by JPs to other Goals. For instance, according to Le Blanc's analysis, progress on Target 1.3 ("Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable") directly supports goal 10 ("Reduced Inequalities") as well as Goal 1 ("No Poverty").

After including the Social Protection baseline framework, the JPs' selected Targets, and Le Blanc's linkages between Targets and Goals, the model contained 56 different phenomena (9 Goals and 47 Targets) with 88 connections between them. (We did not include SDGs 11 and 17 and their associated targets in this analysis, as causal relationships between these Goals/Targets and the rest of the model were not provided by either our baseline logical framework or by Le Blanc's analysis.)

Leverage analysis

We conducted leverage analysis to investigate the complex causal structure of the resulting model. In our approach, we used graph theory algorithms to identify Targets that are potential leverage points and bottlenecks. These algorithms evaluate the connectivity of the system by giving relative scores to Targets that e.g., are more well-connected to the rest of the system, or that are often found on paths between other Targets. The exact measures we used are described in the Results section below.

[2] This model is available for further exploration, and its data may be exported in .xlsx or .csv formats for use in other applications: **https://www.kumu.io/systemicdesign/lnob-v2#jp-toc** For an interactive walkthrough of this report and model see: https://systemicdesign.kumu.io/lnob-jp-leverage-analysis-model?token=9V9L3uJHxw6VZ9sX

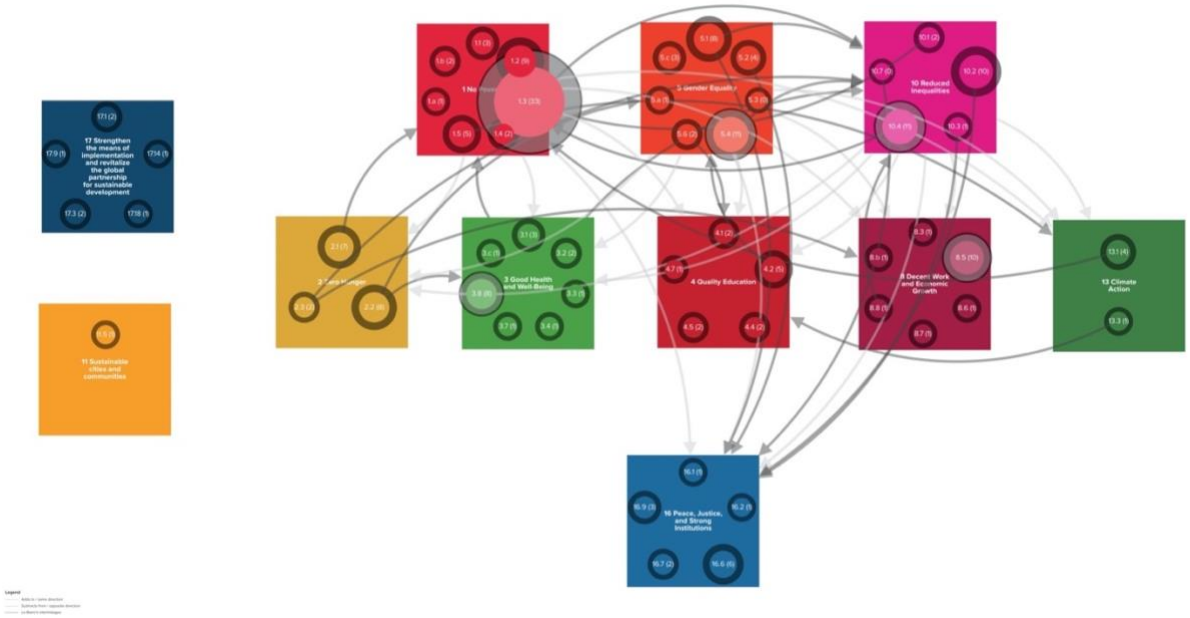

Figure 6. JPs' selected SDG Targets across the baseline logical framework

The JPs collectively selected 53 unique Targets. Because the selection of targets was not informed by the logical framework above, a good test for whether the framework included and structured appropriate SDGs is whether the JPs selected Targets from those Goals. Indeed, most Targets selected by JPs came from the goals above.

Leverage points

Recall that a leverage point is a place within the system where a little effort yields more change throughout the rest of the system. To identify high-leverage targets in this system, we used a weighted reach measure. This scored each Target and Goal by how quickly change would propagate from it to the rest of the system, weighted by how well-connected each phenomenon is to other well-connected phenomena. We identified six candidate leverage points: SDG Targets 10.4, 10.1, 2.2, 2.3, and 5.1. These are illustrated in the figure below.

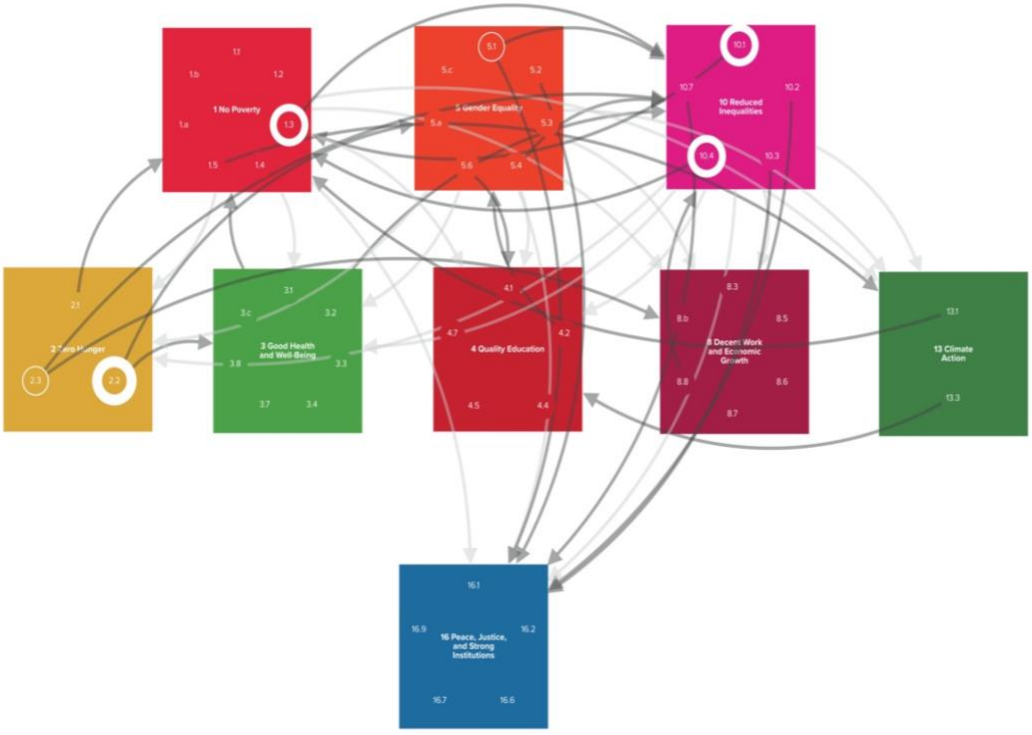

Figure 7. Highlighted leverage points across the system of SDG Targets.

It is important to remember that leverage points are not necessarily the most "powerful" or "important" phenomena, but rather phenomena that, where change can occur according to the causal structure we have mapped of change propagation, effort placed on changing these factors will likely yield progress elsewhere in the system (relative to change in other phenomena). Thus, the Targets listed above are indicative of potentially high-yield strategies for SDG acceleration. It is possible that JPs addressing these Targets early on may see greater systemic progress as a result.

Bottlenecks

A systemic bottleneck is a phenomenon between many other phenomena. To identify potential bottlenecks, we used a betweenness measure, which scores phenomena according to how often they appear on the shortest path between every other phenomena in the system. In other words, for the system to change overall, changes that happen throughout the system likely "pass through" these bottlenecks. In turn, it may be strategic to address these bottlenecks in initiatives that aspire to systemic change.

We identified six potential bottlenecks in this system of Goals and Targets: 4.2, 8.8, 2.2, 13.1, 10.1, and 10.4. They are illustrated in the figure below.

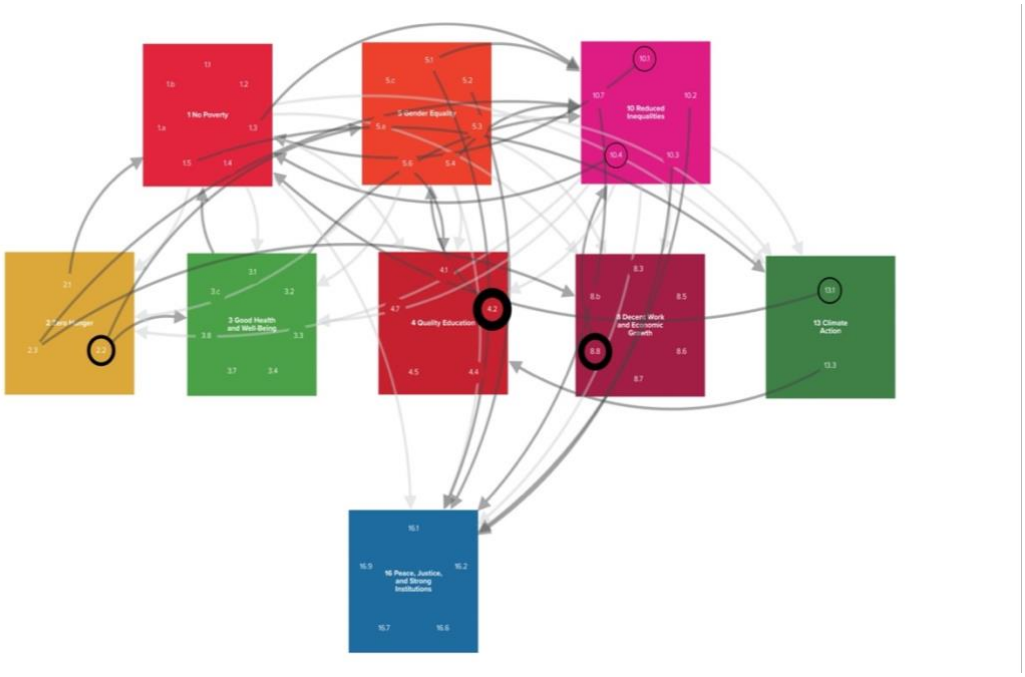

Figure 8. Highlighted systemic bottlenecks across the system of SDG Targets.

An implication of bottleneck phenomena is that no matter how significantly another part of the system may be changed, systemic progress may be limited if bottlenecks are not addressed as well. Thus, a given country's Social Protection strategy that aims to accelerate this portfolio of Goals and Targets should consider the state of the above phenomena in the country's context. If the strategy focuses on other Targets, but these aspects of the system are not in good condition, the strategy may not lead to sufficient systemic change.

Case Analysis of Systemic Theories of Change

To investigate the JP's Theories of Change further, we conducted a case-based analysis of several specific JPs. A defined set of criteria for evaluating systemic theories of change was articulated by analysis of the represented, expected and preferred qualities across the program cases. These principles help assess systemic qualities that might help us evaluate the fit of a model and to compare effectiveness. We identified nine important elements that should be included in a systemic theory of change, and for which we assessed the sample in the context of SDG acceleration.

1. **Degree of integration** – How well do the components of the ToC align together (internal coordination) and how well do they integrate with or address external environmental forces or contingencies (external?)

2. **Identifies systemic risks to performance** – Does the ToC present substantive risk potentials that reveal foresight into potential programme outcomes? Scores are Yes/No, and "Some are indicated."

3. **Presents relevant complexity** – This aspect of the ToC comes from unique aspects of the change model, and it's clearly a judgement as to whether sufficient "complexity" is disclosed. We look for whether the ToC shows awareness of real-world complexity in the JP activities and outcomes.

4. **Identifies specific SDGs** – Scored Yes/No as to whether specific prospective final impacts of the JP model were identified, and if so whether at the SDG target level.

5. **Relevant representation of acceleration toward impact on SDG targets** – A judgment is made as to whether specific activities or outcomes are indicated as contributing to SDG acceleration.

6. Identifies leverage or key factors / activities notably responsible for acceleration. Yes/No

7. **Reveals influence relationships between activities or across the set of outcomes** – Are well-defined connectors or pathways defined for a series of events? Yes/No

8. **Some degree of feedback between activities and outcomes** – This is perhaps very rare, and only seen in some ToCs where cross-connecting lines across activities are found. Expect No/Some/Maybe

9. **Is evaluable via GUIDE criteria** – Patton evaluation principles: Guiding, Useful, Inspiring, Developmental, and Evaluable

Public disclosure is not provided of further details from the case studies here. The summary analysis showed that only seven of the 35 ToCs distinguished complexity or systemic relationships as assessed by these criteria in the planning logic. Most were purely functional, linear logic models or representations of the development plan.

Leverage Analysis of Joint Programme Change Strategies

Last, we conducted a case-based analysis of the theories of leverage of four JPs. These case study analyses investigated each JP's systemic change approach and their potential for the systemic acceleration—especially in terms of progress towards the JP's selected Targets. The goal is to identify the key levers and bottlenecks for whole system change at scale, and to assess the degree to which the JP addresses these phenomena as a proxy for its systemic acceleration potential. We propose that a JP that addresses systems-level phenomena with a leverage-based strategy will be better positioned to accelerate progress on its chosen targets.

Ideally, we would have conducted this analysis on systems models that were created by the teams behind the JPs. Unfortunately, none of the cases included a systems-level understanding of the JP and the issues it targeted. So, these analyses are illustrative of how this approach may enhance future JPs ability to accelerate the SDGs and their Targets through systemically-informed strategy. In other words, insights are not intended to apply to the JPs immediate operations but to inform each country's Social Protection change strategy over time.

Phenomenological Analysis

First, we conducted a deep reading of each JP's strategy, reviewing the Overview and the JP's graphical representation of its Theory of Change. During review, we highlighted phrases or concepts that referred to specific phenomena operating in the system at hand. The goal of this step was to identify every possible significant phenomenon influencing the JP and its goals. This step results in a list of phrases extracted from the report that capture the system's phenomena.

Phenomenological conversion

The tokens from phenomenological analysis are directly excerpted from the text of the JP docs. In the second step, we abstracted these phrases into systems phenomena. For instance, one outcome in a programme strategy states "At least 1,400 children under 12 months are benefiting from a new integrated package of welfare services ...." We converted this to the "Number of recipients of integrated welfare services, including the new MECG, early childhood wellbeing services, and support for birth registration." Then, we identified and combined converted phrases that referred to the same phenomena. For example, we had identified multiple tokens that referred to the government 's capacity to implement the JP. These were combined.

Each of the unique phenomena resulting from this step were modelled as elements in Kumu.

Causal inference

Next, we inferred direct causal relationships between these phenomena based on our understanding of the JP. This resulted in an influence diagram showing the systemic structure of the phenomena modelled in the previous step.

Graph-based leverage analysis

We applied graph theory algorithms to evaluate the structure of the resulting model to identify potential candidates for leverage and for systemic bottlenecks.Phenomena were scored by their systemic reach (how "close" they are to every other element in the system) weighted by eigenvector scores (how connected each phenomena is

to other well-connected elements) to reveal potential leverage. High eigenvector-weighted reach scores suggest that change will propagate quickly from the given phenomenon.

To reveal potential bottlenecks, we scored phenomena by their *betweenness*: the more often a phenomenon sits on the shortest path between two other phenomena, the higher its betweenness score. High betweenness scores therefore suggest phenomena that sit between the paths of change throughout the system.

Evaluation

The results of leverage analysis were then used to analyse the JP's strategy. The leverage points and bottlenecks resulting from leverage analysis were compared with each JP's Results Frameworks, Work Plans, and Risk Management Plans. These plans were used as concrete illustrations of the actual initiatives, actions, and measures the JP would be using. In other words, they represent the operationalization of the Theory of Change (and the JP in general).

In our comparison, we assessed the degree to which the leverage points and bottlenecks we identified were directly addressed in the three plans to identify potential weaknesses in the JP's attempts to generate systemic change. Scores were assigned from "weak" to "strong," indicating how well a given JP addresses potential leverage points and bottlenecks in their plans—indicators of the JP's potential for systemic acceleration.

Results

The degree of complexity and the scope of phenomena captured by the systems models we were able to generate from each JP varied widely. One JP's model contained 27 phenomena and 49 connections; the second, 29 phenomena and 80 connections; the third, 48 phenomena and 128 connections, and so on.The third JP's systems model not only had more phenomena and connections, but these phenomena seemed to account for broader aspects of the system than those modelled from the other JPs. This may indicate the JP was more effectively designed to facilitate systemic change. Evaluating the role these attributes play in the JP's systems change strategy was not explicitly part of our evaluation, however. Perhaps in future studies we may use the quantity, depth, and breadth of phenomena in the modelled systems as a rough method of gauging how each JP appreciated the complexity of the systems they sought to change.

Each JP generally addressed some of the identified key phenomena, but not all of them. The gaps indicate potential weak points in each JP's potential for systemic change. Most of these weak points are addressed at least indirectly. However, if the evaluation we have presented represents valid conclusions about the state of these systems and the strategies of the JPs, addressing them directly may enable deeper impact in the systems they aim to change.

An important limitation of this work is the constraint of inference. Certainly, if each country's planners were to develop their strategies with a systems approach, they may have come to different conclusions. So, we have not presented an ecologically defensible systemic understanding of these issues. We acknowledge that we are likely missing substantial contextual understanding and expertise necessary to make proper judgments about the causal nature of the systems and their environments in these countries. Instead, we have presented what might be, as a systemic design proposal. Our approach shows that it is possible to appreciate the complex structure of these systems, to embed in that structure the change we aim to make, and to then be strategic about how we go about making that change in order to accelerate progress.

This, then, is the most important takeaway from this analysis: these JPs were not necessarily designed with systemic change in mind. Indeed, the JPs focus on implementation and operationalization of initiatives *only* within the scope of the JP. Rarely are the long-term systemic consequences of programming directly considered. The Sustainable Development Goals and their Targets, however, are clearly large-scale long-term phenomena. Acceleration of our achievement of these Goals and Targets must take large-scale long-term contexts into account. It was generally challenging to infer the causal relationship between the JPs and the SDG Targets they were supposed to address, likely due to this disconnect between JP planning and systemic acceleration of the SDGs.

Ultimately, we propose that future JPs should take systemic theories of change and systemic leverage into account to develop strategic approaches to SDGs acceleration and systemic change.

Discussion

The study presented was based entirely on a rapid collaborative research project conducted jointly by the authors in association with the UN Joint SDG Fund. While the relevant findings have real significance for the country joint programmes analysed and the SDG programme overall, we believe the methodology, evaluation approach, and analytical framework to be highly relevant to the systemic design community.Several general recommendations apply to perhaps any transformation program considering systemic design methods and systemic theories of change.

A significant tension we can recognize is the conflict between means and ends as suggested earlier in the discussion, with respect to the desirable tools of acceleration to achieve targets more effectively for systemic impact. It is well-known among program evaluators that attempts to accelerate complex projects can be counter-productive, as it risks focusing resources on single avenues for change that may be misleading. Planners will often accelerate entire projects and major goals, whereas leverage analysis aims to locate more particular actions that might have influence across multiple targets. Systemic reasoning must be used to identify these counterintuitive leverages for acceleration. Otherwise, single-purpose objectives may be accelerated in schedule or objective without accomplishing ultimate impacts.

Another tension is the capture of transformation planning by the very idea of acceleration as a good in its own right. With the pressure to achieve significant responses to the SDG targets, the desirability of acceleration (in each country situation) can lead to a risk of an accelerationist mindset to hasten outcomes. We propose leverage analysis and systemic theories of change as an ethical orientation to determine the most effective, “natural” points of acceleration that can be discovered uniquely in each social ecology and can be determined by the felicitous relationships of SDG targets to each other. While acceleration is a means to an end, it can become a goal in itself, and its pursuit must be balanced by an analysis of long-term impact and consequences.

Strategies for accelerating systems change

We are confident that even the most thoughtfully prepared ToC models using conventional descriptions inherit the format and logic from a much earlier generation of change programs. The UN is now dealing with goals and intended outcomes of programmes dealing with higher-complexity issues than can be adequately modeled. We find a tension with the necessity to communicate transformation proposals effectively to a mixed group of funders and reviewers, with realistic pressures to keep these models as simple as necessary. Design planners might be dissuaded from risking higher complexity models, but these might also communicate much more effectively the knowledge of real complexity in the programme.

The criteria developed for assessing the effectiveness and communicative potential of theories of change can be employed as guidelines for many programme types. These criteria are associated with the most critical functions of the ToC and could also be used as advance proposal guidelines, as checklists for new ToC or programme change goals.

The benefits to designing a systemic theory of change approach (a modeling framework and set of evaluable criteria) would potentially help with all types of transformation proposals in the emerging model of philanthropy funding for system change programs. Funders should be requesting systemic theories of change to get a better grip on the approaches to deal with higher complexity in system transformation.

Without some model of the most significant leverage and contributions and relationships, program leaders are left to guess at which levers and actions would integrate to sustain a program strategy. A systemic theory of change is not a guarantee or single solution, but it could become a necessary tool in the leadership and decision-making in systems change.

References

Funnell, S. C., & Rogers, P. J. (2011). Purposeful program theory: Effective use of theories of change and logic Models. San Francisco: Jossey-Bass.

Jones, P. H. (2020). The social construction of systemic change: Our working theories of change. In. Proceedings of Ninth Relating Systems Thinking and Design (RSD9) Symposium. National Institute of Design, Ahmedabad, India. https://rsdsymposium.org/the-social-construction-of-systemic-change

Jones, P. H., & Murphy, R. J. A. (2021). Redesigning Our Theories of Theories of Change. Systems Thinking Ontario. https://coevolving.com/blogs/index.php/archive/redesigning-our-theories-of-theories-of-change-st-on-2020-11-19

United Nations. (2017). SDG Accelerator and Bottleneck Assessment Tool. United Nations Development Programme.

Le Blanc, D. (2015). Towards integration at last? The sustainable development goals as a network of targets. Sustainable Development, 23(3), 176-187.

United Nations. (2018). Leaving No One Behind – United Nations Department of Economic and Social Affairs. Retrieved 2021-05-21 from https://www.un.org/development/desa/en/news/sustainable/leaving-no-one-behind.html

Meadows, D. (1997). Leverage Points: Places to intervene in a system. Donella Meadows Institute. http://www.donellameadows.org/wp-content/userfiles/Leverage_Points.pdf

Murphy, R. J. A., & Jones, P. (2020a). Design management for wicked problems: Towards systemic theories of change through systemic design. In (p. 16). Design Management Institute.

Murphy, R. J. A., & Jones, P. (2018). Give me the place to stand: Leverage analysis in systemic design. In (pp. 473-487).

Murphy, R. J. A., & Jones, P. H. (2020b). Leverage analysis: A method for locating points of influence in systemic design decisions. FormAkademisk, 13(2), 1-25. https://doi.org/10.7577/formakademisk.3384

Murphy, R. J. A., & Jones, P. H. (2020c). Systemic Strategy: Systemic design methods for complex systems change. Proceedings of Ninth Relating Systems Thinking and Design (RSD9) Symposium. National Institute of Design, Ahmedabad, India. https://rsdsymposium.org/systemic-strategy-systemic-design-methods-for-complex-systems-change

Rava, N. (2019). Integrated policy, sustainable development goals, and new change and governance models: Case study of the UN's joint SDG Fund. https://systemic-design.net/rsd-symposia/rsd8-2019/systems-of-governance

Rava, N. (2020). Shock-Responsive Social Protection: Lessons from the Joint SDG Fund for an Integrated Approach to COVID-19. Social Protection. https://socialprotection.org/discover/blog/shock-responsive-social-protection-lessons-joint-sdg-fund-integrated-approach-covid-19

Rava, N., & Kurbiel, L. (2020). Leave No One Behind. Joint SDG Fund. https://www.jointsdgfund.org/article/leave-no-one-behind

United Nations. (2021). The Sustainable Development Goals Report 2020. UN Statistics Division, Development Data and Outreach Branch. https://unstats.un.org/sdgs/report/2020SS

United Nations. *(2015). Transforming our World: the 2030 Agenda for Sustainable Development.* http://www.un.org/development/desa/financing/sites/www.un.org.development.desa.financing/files/2020-03/N1526986.pdf