Matching An Evaluation to the Dynamics of a Complex System and the Nature of the Intervention

The attached figure is a tool for helping to develop an evaluation design for an intervention in a complex system. Here is an explanation of the figure.

1. The bar across the top saying that a complex system is a combination of organized, adaptive, and random dynamics. We are going to attend to the organized and adaptive. here.
2. The type of intervention into a complex system that is being evaluated tends to be (a) a specific program, service, or product (an entity) that is being introduced into the system and/or (b) a new paradigm for how systems function. (bar on the left)
3. Depending on the combination of the dominant system dynamics and the type of intervention, the evaluation has different emphases. Here is where I would work down the middle of the diagram starting with Outcomes.

    a. An intervention that is predominately an entity being introduced in the system (e.g., a new program or service) is likely to want an evaluation focused on outcomes. If the predominant system dynamics are organized, it will likely be a good match for the evaluation to focus on whether the entity is producing predetermined specific outcomes. If the dominant system dynamics are adaptive, it is likely that a good match for the evaluation will be to focus on whether the entity is producing some predetermined general outcomes or outcomes of some general type.

    b. When the intervention is predominately an entity being introduced in the system with somewhat of a new paradigm, an area of evaluation may be that of spread. If the predominant system dynamics are organized, it will likely be a good match for the evaluation to focus on whether there is fidelity to the defined parts, processes, and outcomes of the entity. If the dominant system dynamics are adaptive, it is likely that a good match for the evaluation will be to focus on whether the entity is adaptable to new contexts, people are developing ownership of the entity, and general design elements are being maintained.

    c. When the intervention is tending more toward a new paradigm than a specific entity or a balance of the two, an area of evaluation may be that of sustainability. If the predominant system dynamics are organized, it will likely be a good match for the evaluation to focus on alignment across subsystems and coherence among the parts and their interconnections . If the dominant system dynamics are adaptive, it is likely that a good match for the evaluation will be to focus on what new entities and outcomes are emerging and seeking to understand underlying patterns that show whether the desired paradigm or general types of entities are evident and congruent with the context. Looking at co-evolution and attractor patterns will help understand what the implications might be for sustainability of the entity/paradigm.

d. When the intervention is decidedly a new paradigm with little or no specification of what the specific entities are to be, the evaluation is likely to focus directly on evidence of the new paradigm coming into reality. The paradigm would be expressed in some set of principles. If the predominant system dynamics are organized, it will likely be a good match for the evaluation to the extent to which a shared vision, goals, and outcomes are being developed among the key players in the situation/system. If the dominant system dynamics are adaptive, it is likely that a good match for the evaluation will be to focus on whether the principles are concrete enough and are being incorporated as some simple rules that guide the behavior of the full range of actors/agents in the situation. There would likely be many manifestations of the simple rules and the entities that form are likely to be continually evolving.

Dynamics of Evaluation Design