Can SD Models Have Greater Relevance When Used Within Participatory Action Research Designs?

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This is What I will Talk about

- The problem of model acceptance and relevance to practice
- How we model, and what our underlying assumptions are
- Potential causes for the disconnect between insights derived from modeling and practical action
- What participatory action research (PAR) is
- How SD could be used within PAR
- How we might increase the relevance of SD by so doing

What Impact Do SD Models Have in and on Practice?

- We don’t exactly know
- However, we are concerned
  - Policy changes occur rather infrequently
    Rouwette, Vennix, & Mullekom (2002)
  - Numerous anecdotal accounts about model or results rejection

How Do Modelers Learn about the Problem?

- “Tapping the mental database”
- The Ford/Sterman elicitation techniques
- The Albany GMB school
- The Dutch GMB school
- All geared at optimizing the model-building process
Model Development (1)

1. Problem Articulation (Boundary Selection)
2. Dynamic Hypothesis
3. Formulation
4. Testing
5. Policy Formulation & Evaluation


Model Development (2)

• Elicit information from subject experts, and then accurately transfer information into modeling space

Problem Space, Subject Experts, and Stakeholders

Modeling Space and Modeling Experts

Model Development (3)

• We model for
  – Accuracy (problem definition and problem representation)
  – Model soundness and robustness
  – Rigor

  – Our underlying assumption appears to be: The more accurate, sound, robust, and rigorous our model, the more the model and the insights derived from it should translate into practice

So, Why is the Transfer Back into Practice (Mostly) Not Happening?
Who Owns the Dynamic or the Messy Problem at Hand?

- The modeler?
- *The* organization?
- Management?
- The people impacted?
- Or, any other stakeholder?

The Social Process of Change

- The modeling experts typically remain distant to both the problem and the proposed solution
- However, as long as problem space and modeling space remain separate, the stakeholders will have difficulty to own the model (and its insights)
- For change to occur, problem owners need to negotiate those changes (see Checkland, Holwell, Senge, etc.)
- The learning conundrum

Rigor versus Relevance

- In 1997, in the MIS field a debate on rigor versus relevance in that field was launched
- To most MIS scholars’ frustration, the sound and robust systems developed in that field had no practical impact whatsoever
- A too functionalist-technical orientation was identified
- Deterministic understanding of outcomes
- Negligence and even outright ignorance with respect to the social process of change through the use of new information systems were found

Action Research

- “Action” and “Research”
- Iterative research design
- Practitioners as co-researchers
- Researchers as co-subjects
- Practical, problem-driven, solution oriented
- Any number of variables
- Theory building; theory co-emerges
- Explicit acknowledgement of subjectivity

AR cycle

1. Diagnosing / Posing the Problem
2. Action Planning
3. Action Taking
4. Evaluating
5. Specifying Learning

The Action Research Cycle, Sussman & Emery (1978)
Limitations of Participatory AR

- Usually no causal explanations are provided
- Predominantly qualitative data
- Less precise problem definitions than in traditional research
- Limited or even no impartiality on behalf of the researcher
- Reduced control over the research process
- Client/practitioner-need driven research process
- Non-standardized research process
- No reduction, no or little generalization
- Situational (practical problem solving)
- Few standards or generally agreed criteria

Integrating SD into PAR

- Absorb the modeling activity into the change process within the problem space

Elements of a Experimental PAR Design with an Integrated SD Component

- Entry interview
- Establishing peer relationship between practitioners and modelers (becoming co-subjects)
- Cross-training (problem at hand, SD basics)
- Early conceptualizing
- Becoming a peer educator; practitioners as co-modelers
- Using mini models
- Gradually expanding model use and scope
- Negotiate and take action guided by insights from modeling
- Using journals and exit interviews
- Document the unfolding of the whole process (social, technical, organizational, and individual)
Summary

• How can we increase the impact of SD on organizational practice?
• Are we too functionalist-technical?
• Do we need a rigor-versus-relevance debate?
• Can participatory action research provide a frame for using SD modeling more effectively?
• Let us try to find out

Any Questions? Comments?