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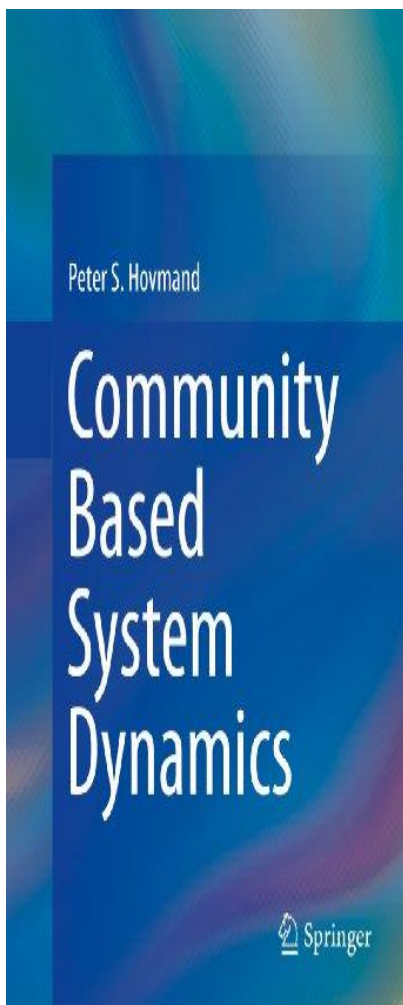
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Community Based System Dynamics

Hovmand, Peter
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“Work that is community based is embedded in relationships”. This is the basic principle underneath Peter S. Hovmand’s book *Community Based System Dynamics*. Community Based System Dynamics (CBSD) is a participatory method for involving communities in the process of understanding and changing social systems. It is written for anyone interested in helping make communities a better place and advance social justice. The contribution Hovmand makes is in the conceptualization of communities as complex systems and in developing a method which combines community based participatory research methods ([Minkler and Wallenstein, 2008](#)) with system dynamics computational modeling ([Richardson, 2011](#); [Stermann, 2000](#)). Hovmand aims at building a community of practice through multiple interventions over time with different groups within the community.

How should we situate Hovmand’s approach within the broader field of simulating social processes? The idea of multiple interventions with different groups resonates with large scale group interventions as developed by [Bunker and Alban \(1997\)](#). Moreover, with his aim to advance local communities, Hovmand comes close to the original idea of action research as formulated by [Lewin \(1946\)](#), who focused on empowerment and mobilizing communities to advocate for and implement changes. The assumption underneath CBSD is that continuity in the modeling process can be reached by continuity in working in the community, where

researchers support participants to accumulate experiences by telling stories and transmitting them to other groups. This process generates co-creation of computer simulation knowledge, empowerment of local communities and advocacy of implementing changes with local stakeholders.

What does the book offer to the readers? The book gives concrete procedures and scripts for different phases in the modeling process, illustrated with experiences based on several years of CBSD projects in the US and in development countries. Hovmand supports his argument by elaborating on several cases of CBSD, for example modeling watershed developments in villages in India, modeling childhood obesity with a local church in St. Louis and modeling teaching system dynamics to students with a local high school in the same city. This brings the method to life and illustrates the particularities that can be encountered in the modeling process with local communities.

We have some recommendations for improvement. As Hovmand considers this book a first step in further development of CBSD we recommend to develop a framework on community based theory, that integrates the present loose concepts on communities ([Fisher and Sonn, 2007](#)), and the concepts derived from liberation theology ([Freire, 1970](#)) and feminist theory ([Frye, 1983](#) and [Heyes, 2000](#)). Also the emphasis in the book on language and speech acts would benefit from a theoretical foundation. “How we define ‘community’ determines who is involved, how the issues get framed, who the stakeholders are, how we understand the politics and power, and even what language we use.” (Hovmand, 2014, p.7). Hovmand’s claim that insights of models can easily be transferred to other groups because the models refer to common experiences in the community needs substantiation. The same goes for the claim that because community members are being educated in SD they will start to initiate complex projects themselves and move as a matter of course into formal modeling and analysis. We know from the assessment of group model building cases by [Rouwette, Vennix and van Mullekom \(2002\)](#) that this aspect of learning from participatory modeling is rarely found. Because the ultimate goal of CBSD is a formal SD model, qualitative group model building with causal loop diagrams is absent or only used for informal conceptualization. We think that, for specific questions, this could be a useful and easier applicable approach towards building models with groups (see examples in [Vennix, 1996](#)). Finally, empirical research into the effectiveness of CBSD would add to the foundation of the method.

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