Book Review
Mediated Modeling: A System Dynamics Approach to Environmental Consensus Building

By: **Kristen Cockerill**

No Abstract

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Mediated Modeling: A System Dynamics Approach to Environmental Consensus Building. Marjan van den Belt. Island Press. 2004. 1-55963-961-X (pbk). 339 pages.

“All models are wrong. Some models are useful.” This W. Edwards Deming quote captures the message in Marjan van den Belt’s overview of using system dynamics models as a mediation tool in environmental decision-making. Her book provides insight into why collaborative modeling is powerful and why it is increasingly being called upon to help decision-makers and stakeholders improve their decisions. Beginners and those more experienced in collaborative efforts—with or without models—will gain insight and ideas from this text.

In van den Belt’s words, “Mediated modeling is a tool for overcoming some of the problems inherent in linear thinking and compartmentalized, nonparticipatory decision making. In contrast to an expert dispensing ‘answers,’ or a discussion about the perceptions of a group of stakeholders, mediated modeling aims for a collaborative team learning experience to raise the shared level of understanding in a group, as well as fostering a broad and deep consensus.” She emphasizes that the process (collaborative) is as important as the product (model) and that even when the model is not as accurate as some might like, creating it fosters learning. In keeping with this participatory, learning emphasis, van den Belt wisely avoids dogmatic language about ‘best ways’ and continuously reminds readers that flexibility is crucial and that any particular process will have unique characteristics. Her approach, like systems thinking, embraces the complexity inherent in environmental issues and in the human dimension of those issues.

Early chapters present the value of systems thinking and hence system dynamics modeling; then explicate the role of mediated modeling in a decision-making process; and establish guidelines for conducting a mediated modeling project. The book includes an excellent discussion of where mediated modeling is situated regarding other frameworks and tools applied to environmental decision-making, such as ecological economics, organizational learning, social psychology, adaptive environmental

management, and ecological risk assessment. There is also an introduction to group dynamics with references to key works related to dispute resolution, consensus building, and establishing behavioral rules in any group endeavor.

The middle third of the book covers five case studies that provide information about both the mediated process and the models as products. While four of the five cases are from North America (the fifth is in Portugal), they are diverse enough to provide a plethora of ideas to assist in conducting a mediated modeling exercise on any environmental issue. Because these chapters are contributions from various authors, they are not uniform in their presentation, but this contributes to the 'attitude' throughout the book that every mediated modeling experience will be different. One distracting aspect is that some references cited within the case study chapters are not included in the book's master reference list.

Following the case studies is a Lessons Learned chapter, which covers limitations and pitfalls to the mediated modeling approach as well as highlighting the quantification component as being unique to mediated modeling efforts. Some of the "lessons" however, should have been anticipated based on the strong body of public participation literature. For example, the suggestion that having a "designated person and/or video/audio tape to record the discussion may allow better retrospective analysis" came as a bit of a surprise because having a dedicated note taker is a basic 'rule' for any effective public participation effort.

Finally, there is an extensive set of appendices providing more detail on the case studies. The appendices are well placed, as they provide technical detail on models that would have been cumbersome as part of the book's body, yet are extremely useful and would have lessened the book's value had they been left out.

One point of contention lies with van den Belt's recommendation that the "mediated modeler" serve as both facilitator and modeler during a project. A pragmatic reason for this recommendation is funding; one person multitasking is cheaper than multiple people doing individual tasks. The skill sets, however, for modeling and facilitating are quite different. Her statement that "…certain skills, such as conflict handling and communication, can be developed by practice" is true, but downplays the specialized expertise that a good facilitator can bring to a project. Any skill can be learned with practice, but I would not want to participate in a project with a technical modeler who was obtaining her first facilitation "practice" with my group. Additionally van den Belt emphasizes that the mediated modeler must remain neutral and practice "constant self-examination" to avoid fixing problems for the group rather than encouraging "joint thinking about the problems with the group." Again, I agree with the sentiment but am not convinced that most individuals can successfully accomplish this. In fact, the facilitator's job may often include reminding the modeler that the process is as important as the product. Van den Belt herself acknowledges that the single facilitator/modeler "may influence the outcome too greatly." Based on my own experience and on communication with others who have completed mediated modeling projects, I would suggest that the facilitator and modeler roles remain segregated.

Despite this disagreement, I have added Mediated Modeling to my reference shelf and I will recommend it to all participants in future collaborative modeling projects. This book contributes greatly to encouraging mediated modeling as a method for helping communities and individuals improve how we think, and hence how we act.