While simulation has become a fairly common tool in the kit of biological and physical scientists, its use remains relatively rare in sociology, as well as other social sciences. In at least one sense, this relative rarity should come as a surprise. Given the complexity of the systems that sociology studies, its emphasis on the importance of interactions between elements, and the distaste that many sociologist have for the simplifying assumptions made in economics, one might expect sociologists to embrace simulation as a tool for building theory.

But simulation is not without its shortcomings. Even though simulation permits far greater flexibility in the relationships specified between variables, it still requires the translation of these relationships into algebraic formulae and therefore entails assumptions about the functional forms of these relationships. Also, though the results derived through simulation reveal that a particular set of conditions can produce an outcome, they generally cannot say whether those conditions always produce such a result. In other words, simulations can define a set of sufficient conditions, but provide limited leverage for identifying necessary ones. And they often provide little more than a “black box,” converting a set of inputs into outputs without providing real insight or intuition as to the reason for these relationships.

Harrison and Carroll’s compact volume on organizational culture offers a strong counterargument to this litany of criticisms. Although they report some new results – for example, using their model to evaluate the effectiveness of law enforcement strategies for disrupting terrorist networks – to a large extent, this book comprises research that the authors have published previously in half a dozen articles and chapters. It nonetheless goes beyond these articles in at least two important respects. First, by combining these results in one place, the book reveals transparently that their wide-ranging results stem from a common underlying model of cultural transmission. Second, Harrison and Carroll allocate far more space to explaining and justifying the construction of the simulation model than any article would allow.

These features contribute to the production of a compelling volume that avoids the typical shortcomings of simulation models. While Harrison and Carroll must define functional relationships between variables just as in any simulation model, they carefully ground these assumptions in existing empirical research on the micro-processes involved and then calibrate the model by ensuring that it produces macro-level results consistent with empirical research.

They also demonstrate how one can effectively use a simulation model to develop theory. Because the model has a relatively small number of “moving parts” – organizations vary
primarily in terms of their selectivity in hiring and retention and in their intensity of socialization – the reader can easily understand the model. Moreover, rather than simply showing that one set of values can produce a particular outcome, by examining the behavior of the simulation across wide ranges of the values of the variables, Harrison and Carroll provide insight into the probable necessary conditions implied by their findings. And, through careful examination of the behavior of the model across these values, they generally offer excellent insight into the intuitions behind the relationships they find. The book therefore provides an exemplar for the use of simulation in the social sciences.

Forced to offer a complaint, I would fault the authors only for the terseness of their presentation of the results. In the chapters describing the behavior of their model, nearly every paragraph and sometimes almost every sentence contains a result of potential interest to some set of researchers. (Because of this wealth of results, I also felt that any attempt to summarize the findings would do little justice to book.) It is not that Harrison and Carroll ignore or dismiss these results, but their concise treatment does not always explicate the links between their results and the relevant research streams. I often found myself rereading sections and discovering new nuggets on each iteration. Undoubtedly, I will want to review certain sections again and again in the context of particular research questions.

I would recommend the book broadly to anyone interested in the internal dynamics of organizations or cultural transmission (whether inside or outside organizational contexts), but I would classify it as a must-read for at least three audiences: (1) The volume is obviously of interest to anyone researching organizational culture; (2) Given its interactions with and implications for organizational demography, I would also place it in this category for those researchers studying the demography of organizations or teams; and (3) Sociologists interested in simulation methods should read it as a model to emulate. A course on simulation methods might even usefully build on the book as its primary text.