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Social Structures

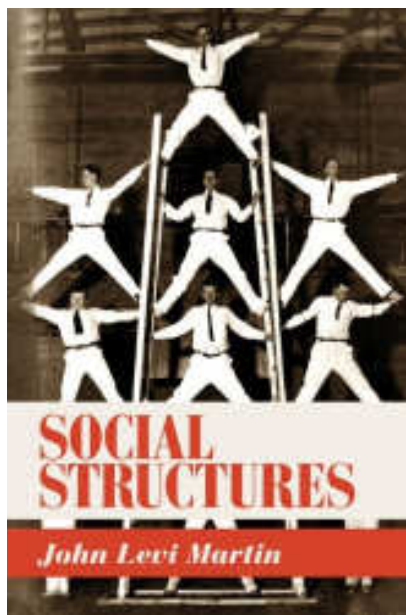
Martin, John Levi

Princeton University Press: Princeton, NJ, 2009

ISBN 9780691127118 (pb)

Reviewed by Ahmadreza Asgharpour and Flaminio Squazzoni

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This is an example of a standard sociology book where JASSS readers will not find a single word on social simulation, nor reference to agent-based computational models, but has extremely useful insights to stimulate ABM research. Written by a leading and eclectic sociologist of the University of Chicago, and requiring about ten years of hard work, *Social Structures* is a brilliant sociological *excursus* on social networks and structures that at least JASSS aficionados of social network simulation and those who are studying the emergence of social structures will find useful.

Based on an impressive literature that ranges from zoology to anthropology, from epidemiology to sociology, this book provides a coherent and comprehensive account on how social relationships appear and aggregate into large-scale social structures from the bottom-up. Though not universally familiar to conventional sociologists, this link of the simplest social relationships and more complex social structures sounds quite familiar to those involved in agent-based computational sociology research. Moreover, although essentially theoretical, this book does not underestimate the relevance of evidence and empirical details. Furthermore, in this joint effort of theory and evidence, there is an important message for networkologists, who may sometimes be more concerned with abstract features of social networks than with real world social phenomena.

In the introduction, the author makes distinction between his perspective and network analysis and social system functionalism. He draws inspiration from Georg Simmel's formal sociology and Harrison White's social network studies, unfortunately underestimating the important contribution by some of Simmel's follower such as Norbert Elias. This unfortunately is a common trait of many US Simmelian sociologists, alas – that would otherwise improve the connection between space and time inherent in any social structure. As such, he emphasises that sociological interest lies in "relationships" rather than in "relations", in that, while the latter deal with structural features of networks, the former refer to

conduits that guide social action. On the other hand, he clarifies the point that structural properties of social systems are the *explanandum* of sociology rather than its *explananda*. The core idea is that it is difficult to understand large scale social structures without paying due attention to small scale repeated forms of agent relationships that are responsible for the emergence of the former.

The author looks at different foundational types of social relationships typical of simple social groups, such as acquaintance circles or gangs, and focuses on some well-known social mechanisms, such as the generalized exchange or the patron-client relationship. As a result, he provides a sophisticated picture of the emergence of important social structures that populate our world, such as political parties and the armies, from simplest patronage relationships. In doing so and by connecting theory and empirical evidence, he makes a clean sweep of some abiding commonsense beliefs. For example, the formation of political parties does not depend upon a voluntary aggregation of individuals who share common interests, but is the result of the aggregation of vertical patronage-type relationships.

By connecting the simple and the complex, the local and the general, the author builds a concrete bridge between social networks and the analysis of social structures. That is, between two fields that are still in search of a tighter connection. In our opinion, social simulation would further help to do this.

Unfortunately, the book also has some weak points, in particular regarding institutions. Firstly, the author does not provide a convincing definition of "institutions" and suggests excessive simplifications when he treats the connection of values/norms and institutions. For instance, following a rather dated contribution by Milgram, the author argues for the instability of institutions against the stability of values, dismissing the issue in a few sentences. Evidently, this is a less developed part of the book, but, most importantly, it is not clear how social structures result in stable, long-time institutions that also loses trace of their genealogy. Some reference to Norbert Elias' attempt to explain the space-time dimensions of the *long durée* of social structures could have helped somewhat (e.g., Elias 1982 and Elias 1983). The same can be said for the lack of attention to the evolutionary theories of social institutions. Although "space" in its nice geometrical representations is important in the social network literature and is the favourite dimension when dealing with social relationships, it is worth remembering that in society "space" always means "time", too.

Secondly, another aspect not presently fully developed (this is also explicitly admitted by the author himself, see p. 16), rather crucial for sociology and social simulation, is the relevant role that institutions can play when they influence changes in social relationships. The author's direction of explanation is oriented from simple social relationships and forms to complex social structures in a bottom-up fashion. This is also pivotal in social simulation, but it cannot cover our entire field of interest. Indeed, it is well-known that, particularly in dramatic phases of societal change and transition, some modifications at the macro level of social institutions can determine relevant changes at the micro level, at least by providing room for innovative social action. We believe that the explanation direction should be somewhat reversed (e.g., Timmermans, de Haan and Squazzoni 2008). The link between these two levels of analysis, far from being a chance to perpetuate an ontological 'chicken and egg' dispute, is crucial to explain

long-term social phenomena and the unpredictable pathways of social change (e.g., Squazzoni 2008).

In conclusion, this book highlights a number of important points. For structural sociologists, the challenge is to break down their approach by trying to bring explanations of large-scale social structures back to small-scale details. On the other hand, the challenge for social network sociologists is to take into account the largest structural consequences that certain types of social networks might have especially at an institutional level. At the same time, social network sociologists can see how to improve the "social" side of their network models. For social simulation modellers with a particular background in sociology, the book is full of examples, intuitions, suggestions and intriguing materials to elaborate simulation models.

Of course, some exigent JASSS readers will complain about the lack of a closer connection between theory and data through models and in particular for the one-off use of formalized models. However, we are quite sure that they will enjoy this repertoire of simple, pervasive and relevant social structures that might be investigated intelligently with agent-based simulation. To sum up, sometimes, good ideas come from what seems, at a first glance, a distant source.



References

ELIAS, N (1982) *The Civilizing Process: State Formation and Civilization*. Oxford: Basil Blackwell

ELIAS, N (1983) *The Court Society*. Oxford: Basil Blackwell

SQUAZZONI, F (2008) The Micro-Macro Link in Social Simulation. *Sociologica*, 2, 1, downloadable at:
<http://www.sociologica.mulino.it/journal/article/index/Article/Journal:ARTICLE:179>

TIMMERMANS, J, de Haan, H and Squazzoni, F (2008) Computational and Mathematical Approaches to Societal Transitions. *Computational and Mathematical Organization Theory*, 14, 4, pp. 391-414