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The Oxford Handbook of Social Networks

Ryan Light & James Moody (editors.), 2020.
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This volume was hard for me to evaluate. My conception of a handbook, on any topic, is that it needs to be comprehensive in its coverage. While I understand complete coverage of any field is exceedingly difficult, if not impossible, this handbook fails this criterion for reasons I will detail below. Even so, there is a large amount of useful information in this handbook despite its serious flaws. While assembling some great chapters, the editors did not draw attention to the many links between the chapters they had assembled. In terms of content, there are thirty-three chapters on a diverse set of social network analytic content. Due to space limitations, I cannot comment on them all. Some of the chapters are most informative and useful.

While the opening chapter (“Introduction”), written by the editors, points towards divisions in the field, the chapter does little to deal with them. Of course, divisions in the field will exist. Fortunately, other chapters address this issue.

Chapter 2 (“Network Basics,” Light and Moody) introduces basic concepts in a reasonable fashion. But in doing so, the authors introduce the concept of boundary specification for networks, a most important concept. Yet they do not cite the authors who introduced this critical concern to the literature! Fortunately, this lapse was corrected in Chapters 7 and 8. Again, Chapter 2 provides little linkage between the content of the chapters in this handbook. I find this most unfortunate. Chapter 3 (“Theories of Social Networks,” Fuhse) discusses the topic of theories in social networks. Clearly this is an important topic meriting extensive consideration. But the author attacks a manuscript in the literature that made a distinction between “network theory” and the “theory of networks.” The distinction is very reasonable. But the author claims there is no theory here but only network mechanisms. Network mechanisms about networks are inherently theoretical.

Chapter 4 (“Networks and Neo-Structural Sociology,” Lazega) provides an excellent introduction to the links between individual and collective capabilities. The author provides extensive links to his prior work that is completely justified. Chapter 5 (Kitts and Quintane) considers the need to “Rethink Social Networks in the Era of Computational Social Science.” No doubt this is an important topic. But this presentation promotes the conceptions of networks and network structure of its lead author. Of course, this is reasonable. But I remained unsure about the authors’ claims about implications of the revolutions beyond this observation.

Chapter 6 (Martin and Murphy) discusses the concepts of “Networks, Status, and Inequality” in an intriguing fashion. These are arguments that the social network analytic community has to consider further. This chapter would have been more compelling had it been coupled to network data. Chapter 7 (adams, Santos, and Williams) provides an excellent introduction to the topic of “Strategies for Collecting Social Network Data.” The observations of these authors merit further attention. The same holds for Chapter 8 regarding “Social Network Experiments” (Brashears and Gladstone). The field will benefit from more well-designed network experiments. Chapter 9 (McCormick) presents an excellent introduction to scale-up methods, a most important innovation.

Chapter 12 presents a useful “Introduction to Statistical Models for [Social] Networks” (Kuskova and Wasserman) without breaking new ground. This is not a criticism as it displays the particularly important foundations that were essential for the future developments. Chapter 13 (Lusher et al.) presents two “Advances in Exponential Random Graph Models” (ERGM) that have enjoyed an explosive development in the field. The authors present both ERGM and ALAAM (autologistic actor attribute models) in persuasive ways. However, it would have been more useful for the authors to have presented results of using these methods on the same data sets if this is possible. This would have allowed readers to assess the relative merits of these approaches.

Chapter 15 (Frank and Xu) presents a useful consideration of “Causal Inference for Social Network Analysis,” a most vexing problem for the field. The authors are correct in that we need to develop careful and comprehensive theories about the complexities of network phenomena. They are correct also in stating that we need to gather longitudinal data, and get rich covariate data whenever possible. It is unfortunate that the volume does not connect these observations to other most relevant chapters in this handbook.

One of the most over-used and completely misunderstood concepts in the SNA literature is centrality. Chapter 17 (Borgatti and Everett) transforms this debate by compellingly providing “Three [new] Perspectives on Centrality.” I hope that readers of this chapter will pay close attention to the arguments it contains. Chapter 18 (Moody and Light) provides a discussion of “Network Visualization,” a topic that has exploded in recent years. The authors are correct in thinking that when they are good, the images are most compelling. They are correct also in claiming that when they are bad, they are just distracting. It is unfortunate that the images they present failed the criteria they articulated.

Chapter 19 (Neal) presents a useful discussion about “The Spatial Dimension of Social Networks,” a most important topic, While the coverage is good, it is far from being complete. However, a more detailed consideration of the spatial dimensions of networks is presented also in Chapter 24 (Knappett) for the field of archaeology.

Chapter 21 (Mützel and Breiger) concerns “Duality beyond Persons and Groups,” presenting many useful ideas. It is, also a complete delight for another reason. One of the co-authors admits to being ‘wrong’ in one of the most important articles in the literature on duality. I disagree very mildly with this assessment but appreciate this humility. Few authors of this volume show any indications of acknowledging their own limitations. We all have them.

Chapter 26 (Merli, Curran and Barbenchon) considers the ways in which social network analytic ideas can be coupled to demographic analyses. Initially, their argument was premised on the mistaken idea that network analyses do not consider actor attributes. Once, this may have been true, but the field has moved on. The authors write that network ideas and demography appear to be conceptual opposites. Fortunately, they ignore this with their subsequent presentation. The chapter would have been strengthened with more empirical details. The idea of fields merging ideas continues in Chapter 27 (Parkinson, Wheatley, and Kleinbaum) with a useful discussion of neuroscience and network ideas. The interdisciplinary theme continues in Chapter 28 (Abraham and Parigi) with a consideration of “Computational Social Science.” While interesting, the empirical evidence that is provided is far from being convincing. Chapter 29 (Jackson, Rogers, and Zenou) expands the field by incorporating economics in a most useful fashion, especially with regard to what flows over network ties and the constraints on these flows.

Chapter 31 (Zhou) introduces a discussion of “The International Trade Network.” While useful, the discussion could have been expanded to include other relations between nations. This is a problem. Changing topics, an essential part of all research worlds is the collaboration between scientists distributed across the globe. Chapter 32 (“Maps of Science,” Börner) provides a concise and informative introduction to this area of research. Chapter 33 (Smith and Papachristos) provides a nice introduction to “Criminal Networks” while recognizing the acute problem of getting reliable data about them.

As an overall assessment, this handbook contributes useful materials to the literature despite some serious problems in the form of omissions. These omissions are very troubling. A reasonable expectation is that a handbook would have a good coverage of the field in a comprehensive fashion. This volume falls short as too many important social network analytic research areas are omitted. There are some tangential mentions of blockmodeling in the volume. But there was no chapter on this topic or, far more importantly, the topic of partitioning of networks in general which includes many researchers from multiple fields. This includes community detection which received a few fleeting mentions. Partitioning networks is a most important topic and having no chapter on this topic is a most serious omission in this handbook. There are fleeting references also to temporally distributed social networks. There is a large literature on this topic, one that is of critical importance. Not having a chapter devoted to this area is another appalling omission from this handbook. Again, there were mentions of signed networks in some chapters. There was no chapter on this topic. This is another burgeoning field of analysis that includes both technical issues and multiple substantive domains. This is another serious omission from this handbook. Two chapters raised the tricky issue of inference when data points in a network are interdependent. This ought to lead into a consideration of network autocorrelation models. A thoughtful consideration of this issue is missing also from this volume. A chapter on SNA software with a discussion and comparisons of the more widely used software would have been a useful addition. So would a chapter on algebraic approaches to networks and their applications.

This handbook may have the worst index of any book I have seen. So many items, both authors and topics, from the many chapters do not appear in the index. Whether this is due to the publisher or the editors is impossible to discern. But, at a minimum, it is clear that the approach used to create the index leaves much to be desired.

My hope for this handbook is that it will steer researchers in the direction of doing serious substantively-based empirical research. There is considerable material in the handbook for promoting this. But there are chapters and parts of chapters that encourage scholars to write about networks rather than do empirical research. I hope readers of this handbook will ignore these ideas.

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