Small Groups as Complex Systems: Formation, Coordination, Development, and Adaptation

Holly Arrow, Joseph Edward McGrath, Jennifer L Berdahl
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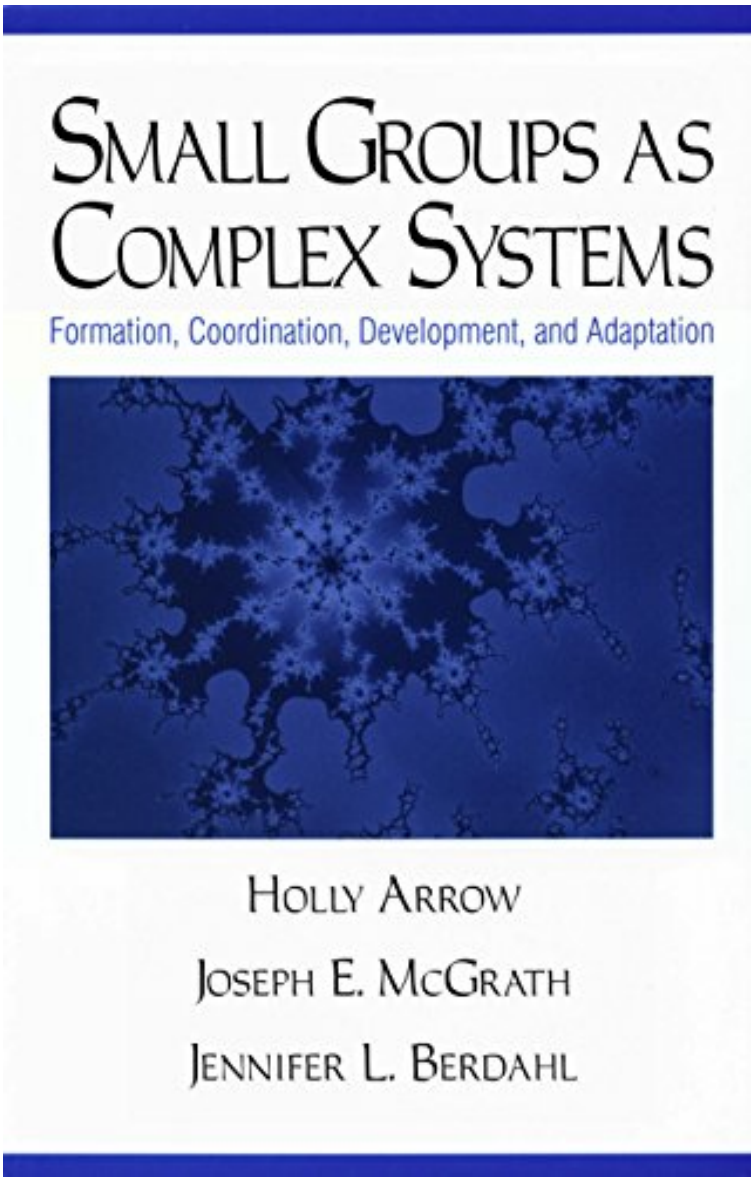

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Holly Arrow, Joseph Edward McGrath, Jennifer L Berdahl : Small Groups as Complex Systems: Formation, Coordination, Development, and Adaptation before purchasing it in order to gage whether or not it would be worth my time, and all praised Small Groups as Complex Systems: Formation, Coordination, Development, and Adaptation:

13 of 13 people found the following review helpful. Some Gems for Complexity ManagementBy William A. ReedI wish I had found this book in 2000 when it was published. It was groundbreaking at the time and still an excellent

book on theories of small groups. It is primarily an academic book for psychological and sociological research on small groups but also includes insights for business and other disciplines.But now that 14 years have passed since its publication it clearly lacks the latest research on groups and the world has moved on. Yet, my reason for reviewing this book and recommending it, is that remains an entry point for bringing complexity theory to human and organizational systems. Again, while it lacks the latest research (because of its age) it has clear and concise language about complexity concepts that make it relevant today.The book is divided into three parts. Part I is about the history of small group scholarship. Part II introduces a complexity-oriented theory of small groups. Part III speaks of implications of the theory along with strategies for future research. Since much has changed in the complexity field in the last decade, I will not critique the theory or strategies that were proposed at the time of publication. Rather, I will just list some gems that I found particularly valuable in 2013.1. The authors begin by noting that "many of the important phenomena regarding groups function as nonlinear, recursive, systemic relations - hallmarks of complex systems" (p. 27) and that: "Small group research studies done in the typical experimental setting not only fail to study the interactions between group and embedding context but take great pains to strip away "irrelevant" contextual factors" (p. 27). This is still a point of contention today - but the authors got this right. It's a good reference for introducing complexity theory.2. A number of complexity terms are introduced, defined, and applied within the context of small groups or organizations:Groups as self-organizing systems (p. 38)System level emergence from local actions (p. 56)Attractors (p. 57)Initial conditions (p. 74)Chaos theory (p. 155)Adaptation (p. 172)Fitness Landscape (p. 172)Feedback (p. 202)(Generally a dynamical systems perspective - not always consistent with complexity theory)Co-evolution (p. 207)3. The reader will find much to like about the application of these topics within the context of groups and organizations. It especially provides an in-depth discussion of fitness landscapes and attractors which are taken from the mathematics of complex systems. Here, these topics are applied in a literal as well as a metaphorical way to explain particular types of group behavior.Overall, the authors' perspective and theoretical development is based on a synthesis of dynamical systems theory, complexity theory, and general systems theory to explain numerous group processes (formation, development, transactions, etc.). It is difficult to judge nearly 14 years later, the specific contributions that were made at time of publication, since we know much more today about organizational complexity. For example, it is much more likely today that researchers incorporate stochastic variables into models of complexity rather than considering them to be non-relevant (p. 38).Today, we also appreciate that groups and organizations (due to path dependence and learning) are far-from-equilibrium, a concept which departs from dynamical systems theory where systems are perceived to be stable or correctable to regain stability. Consequently, concepts such as feedback are envisioned and function in very different ways from some of the descriptions in this book.Much has also changed in the study of social networks which particularly enrich the topic of group behaviors. Today's research has advanced our understanding of local behaviors affecting system outcomes, especially given the power of computers to model high degree vertices and edges in networks to reveal the effects of small changes.None of these comments are criticisms of an excellent book published in 2000. Those who study group processes and complexity will benefit from this resource.If you found this review helpful please click "Yes".

What are groups? How do they behave? Arrow, McGrath, and Berdahl answer these questions by developing a general theory of small groups as complex systems. Basing their theory on concepts distilled from general systems theory, dynamical systems theory, and complexity and chaos theory, they explore groups as adaptive, dynamic systems that are driven by interactions among group members as well as between the group and its embedding contexts. In addition, they consider not only the group's members and their distribution of attributes, but also the group's tasks and technology in order to understand how those members, tasks, and tools are intertwined, coordinated, and adjusted. Throughout the book, the authors focus our attention on relationships among people, tools, and tasks that are activated by a combination of individual and collective purposes and goals that change and evolve as the group interacts over time.

About the AuthorDr. Arrow has two major research interests.nbsp; The first is the formation and development of small groups as complex dynamic systems.nbsp; The second is the psychology of war, in particular the evolution of social capacities that help men and women cope with the challenges to survival and reproductive success posed by war.nbsp;nbsp; Topics of recent papers include gender relations in the military, the evolution of heroism,nbsp; the role of friendship in dissolving the social anxiety of outgroup interactions, sources of cohesion in groups of different sizes, and using complexity to improve thenbsp; effectiveness of groups innbsp;health care.