

## Methodological Advances in the Study of Group Dynamics

Donelson R. Forsyth  
Virginia Commonwealth University

What is science? Although philosophers and researchers continue to debate this question, George Caspar Homans (1967) struck at the heart of the matter when he wrote,

When the test of the truth of a relationship lies finally in the data themselves, and the data are not wholly manufactured—when nature, however stretched out on the rack, still has a chance to say “No!”—then the subject is a science. (p. 4)

Researchers and practitioners alike recognize that all conceptual analyses of groups, no matter how intellectually alluring, must be tested with procedures that meet the field’s scientific standards (Seligman, 1996). Through research, we separate fact from fiction and truth from myth.

But how can researchers “stretch nature out on the rack”? How can they test “the truth of the relationships” they posit? The authors of the articles in this special issue on research methods offer new answers to these questions. All recognize the unique difficulties researchers face when they study not only people, but people embedded in small groups. Groups change rapidly over time as members join and depart, as norms and roles evolve, and as the group’s focus of attention shifts from one task to another. Group processes themselves, including leadership, communication, and influence, are notoriously difficult to document objectively, for many of the traditional tools of the social scientist (e.g., surveys, naturalistic observation) fail to provide sufficient detail when the subject of study is a group. Researchers who study groups must also deal with a host of methodological and statistical problems that the researcher who studies only isolated individuals can avoid (Keyton, 1994; Lakin, 1979).

The articles in this issue describe how the problems associated with studying groups can be turned into advantages. The first three show

how research methods that have been used to study individual-level processes can be fruitfully applied to study groups. Mullen, Driskell, and Salas (1998), for example, describe how they use meta-analytic methods to answer questions about leadership, intergroup biases, and group performance. Meta-analysis provides a more definitive summary of prior research than narrative reviews, but its use in group dynamics is particularly valuable given the greater difficulty of conducting original research with groups. Marcus (1998), in a similar fashion, explains how the social relations model that Kenny (Kenny, Kashy, & Bolger, 1998) developed to examine data collected in experimental studies of social perception can also be used to document shared perceptions in a group context. This approach, rather than lamenting the interdependence of group members, exploits this interdependence by systematically identifying the extent to which group members share a common outlook, and the extent to which a group member’s perspective differs from that of one or more of the other group members. This method is used when data are collected in a round-robin design, but the consensus-estimating methods described by Conway and Schaller (1998) in their article can be used with a wide array of data types.

Seal, Reicher, and their colleagues use more qualitative, small-*n* methods to deal with the complexities inherent in studying interdependent individuals. Seal, Bogart, and Ehrhardt (1998), for example, review the use of focus groups in research before using this method in a study of heterosexual men’s perceptions of their intimate relationships. Reicher and Sani (1998) explore intergroup conflict and communication with case study methods and in-depth, “thick” descriptions of group members’ verbal interactions. Both of these articles call into question the distinction between qualitative and quantitative methods, for they take advantage of quantitative evidence to draw conclusions as necessary. They also make the point that qualitative studies are not necessarily subjective, speculative, or methodologically lax.

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Correspondence concerning this article should be addressed to Donelson R. Forsyth, Department of Psychology, Virginia Commonwealth University, Richmond, Virginia 23284-2018. Electronic mail may be sent to jforsyth@vcu.edu.

The final articles in this issue all focus on the levels-of-analysis issue. As Moritz and Watson (1998) note, researchers too often focus on individuals in groups, or on groups per se, and in consequence ignore the valuable information that can be obtained by considering individuals as nested in groups. Researchers often view the interdependence of group members' responses as statistical noise that violates the assumptions of their statistical procedures, but Moritz and Watson review a number of techniques that can exploit this interdependence. Pollack (1998) shows how one such method, hierarchical linear modeling, can be used to understand a group-level concept—collective efficacy—and Nezlek and Zyzniewski (1998) provide a general summary of the statistical advantages that these new data-analytic methods provide.

These articles, taken together, highlight the growing methodological sophistication of group researchers. Although they continue to rely on certain basic methods of measurement and design, new techniques—including meta-analysis, round-robin designs, consensus estimation procedures, within and between analyses of variance, hierarchical linear modeling, focus groups, and context-sensitive content analyses—have been added to the empiricist's toolbox. Groups are still difficult to study, but these new methods make the researcher's load a little lighter.

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