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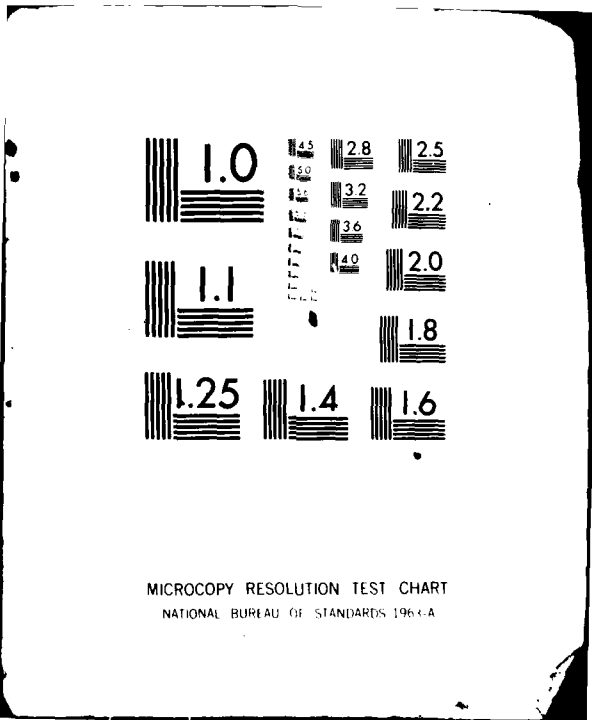
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# INNOVATIONS IN METHODOLOGY

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## METHODOLOGICAL INNOVATIONS FOR STUDYING ORGANIZATIONS

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A project sponsored by Division 14 of the American Psychological Association, funded by the Office of Naval Research and the National Institute of Education. The Conference was held March 1981 at the Center for Creative Leadership in Greensboro, North Carolina

Now available to the organizational researcher--materials and professional contacts from an effort to address pressing methodological issues

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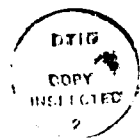
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### ISSUES ADDRESSED

Conducting research on complex organizations is a complex task. Social scientists studying organizations are faced with a number of specific challenges in carrying out high quality research. They include:

- Collecting and then sharing qualitative data in ways that fit into a wider body of knowledge.
- Phrasing research questions in ways more dictated by the significance of the issue, less by what other researchers are doing.
- Picking strategies (such as a field experiment or survey methodology) on bases other than expediency or familiarity.
- Making sense of patterns of results from a diverse set of studies conducted.
- Designing and executing research to increase the chances that the finding will actually be used by decision makers in organizations.
- Using new, powerful quantitative analytic techniques appropriately.

These methodological issues were addressed by a group of eighteen social scientists over a two-year period. This brochure describes the results of this effort and tells how to obtain the materials that have been created. ←



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**WORK PRODUCED**

**THEME:** Innovative Ways of Collecting and Analyzing Qualitative Data

**ISSUES:** What are some examples of useful and nontraditional qualitative methodologies? Can these be applied in ways that create meaningful generalizations about organizational phenomena?

**AUTHORS:**

John VanMaanen (coordinator of the group) is Professor of Organizational Psychology and Management at the Massachusetts Institute of Technology. His research interests center on socialization practices in work organizations, varieties of police work in urban areas, and the occupational culture of American fishermen.

Robert Faulkner is Professor of Sociology at the University of Massachusetts, Amherst, and is affiliated with that university's Social and Demographic Research Institute. His current research has been on the social psychology of work and career dynamics among artists in the Hollywood film industry.

James Dabbs is a Professor of Psychology at Georgia State University. His research interests focus on unobtrusive measures, noncognitive processes in social behavior, and novel ways of collecting and analyzing research data.

**PRODUCTS:**

After a brief introduction, this monograph opens with a paper by VanMaanen, titled "Fieldwork on the Beat: An Informal Introduction to Organizational Ethnography." The paper draws on the author's considerable experience as an ethnographer to illustrate ways of using techniques such as participant observation, formal and informal, interviewing, document collecting, filming, and recording to

create integrated and in-depth understanding of organizational phenomena. Illustrations are taken from VanMaanen's fieldwork in police agencies over the past eleven years. A slide and tape show illustrating the points in the paper is available as a supplement.

Faulkner's paper, titled "Improvisations on a TRIAD," offers a research theme, and then shows how improvisation with research methodologies can gloss and enrich that theme. As a case in point, Faulkner draws on his own multi-method inquiry into the development of careers in the Hollywood film industry. Throughout, Faulkner emphasizes the interplay between evidence from archives and documents on the one hand, and intensive interviewing and observation on the other.

Dabbs' paper, titled "Making the Invisible Visible," takes a more focused, behavioral approach than the others, and shows how careful recording of behavior (often using film techniques) can provide opportunities to use data analysis techniques that are simultaneously rigorous and nontraditional to unearth patterns that are otherwise hidden. A videotape narrated by Dabbs, "Making Things Visible," illustrates a variety of data collection and presentation techniques described in the paper; the videotape is available as a supplement.

The monograph closes with a brief summary by VanMaanen, in which he explores the similarities and differences among these three approaches to qualitative methodology.

**THEME:** Innovative Ways to Find And Define Research Problems and Questions

**ISSUES:** What procedures can be used to help researchers discover and frame research questions? How does the phrasing of problems and issues constrain the research that is conducted and published? How can problems be restated to foster innovative ideas for research?

**AUTHORS:**

John P. Campbell (coordinator of the group) is Professor of Psychology and Industrial Relations at the University of Minnesota. His principal research interests are in decision making and problem solving, training and development, leadership, performance assessment, and multivariate prediction models.

Richard Daft is Associate Professor of Management at Texas A&M University. His research interests have to do with organizational innovation and change, the use of information by managers, control system design, and the philosophy of organizational research.

Charles Hulin is Professor of Psychology at the University of Illinois, Urbana. His research interests are applications of modern measurement theory to problems in industrial/organizational psychology, the study of interactions between individual differences and organizational characteristics on attitudes and behaviors of employees, and general methodological issues in organizational research.

**PRODUCTS:**

Following a brief introduction (by Campbell), the monograph opens with a review of what is actually in the published literature having to do with organizations. This is contrasted with the results of a survey conducted by the authors that shows what scholars believe to be the highest priority research needs in the field--and what managers and administrators have to say in response to the same question.

The monograph then turns to an assessment of where "good" and "bad" research questions come from. This section summarizes what established scholars in organizational research have to say about the origins of their best and their worst studies. These findings are compared with interview comments of people who have carried out studies generally viewed as "milestones" in the field.

Finally, the monograph turns to a discussion of various strategies and heuristics for formulating research questions that are simultaneously of high interest to the scholarly community and likely to generate substantive findings of practical import. These ideas--which include things to avoid as well as things to do--summarize in capsule form the features of research problems and the research process that are most likely to result in noteworthy research findings.



**THEME:** Better Ways of Making "Judgment Calls" in Methodological Decision Making

**ISSUES:** Research on organizations involves many choices for which no firm rules or explicit algorithms exist. Can the research process flow in a fixed, logical sequence? Or are there some inherent dilemmas involved? What are the tradeoffs required at the strategy, design and measurement level?

**AUTHORS:**

Joseph E. McGrath (coordinator of the group) is Professor of Psychology at the University of Illinois, Urbana. He has conducted research on small group effectiveness, on negotiation and bargaining, and on the social and psychological aspects of stress.

Joanne Martin is Associate Professor at the Graduate School of Business, Stanford University. She has special interest in relative deprivation and in how cognitive processes affect behavior and the construction of "reality" in organizational life.

Richard Kulka is a Senior Survey Methodologist at Research Triangle Institute in North Carolina. He has special interests in innovative uses of survey methodologies.

**PRODUCTS:**

After an introductory section (by McGrath), the monograph opens with a paper titled "A Garbage Can Model of the Research Process" by Martin. This paper calls into question traditional, rational models for conducting research, and shows how a "garbage can" model (drawn from the Cohen-March-Olsen garbage can model of organizational choice) provides a better representation of how researchers actually make decisions about what to study and how to do it. The implications of using "garbage can" thinking in methodological decision making are explored.

Next comes Kulka's "A Whitman's Sampler of Choices and Constraints in Social Research." For his paper, Kulka interviewed a

number of distinguished researchers about how they actually carried out their work--with emphasis on the divergences between what was done and what conventional wisdom says "should" be done. Out of these interviews come insights about the role of judgment and circumstance in organizational research that call into question traditional methodological rules and prescriptions.

The third paper, by McGrath, is titled "Dilemmatics: The Study of Choices and Dilemmas in the Research Process." The paper, which is itself quite serious, is supplemented by "The Judgment Calls Follies" (a slide and tape show that playfully reviews the choices and dilemmas faced by researchers). McGrath views the research process as a series of interlocking choices in which researchers attempt simultaneously to maximize several conflicting desiderata. Each of these choices is reviewed, and some ways of dealing with the fact that there are no generally right answers for carrying out research are explored.

The final paper is "Some Quasi Rules for Making Judgment Calls" by McGrath, Martin, and Kulka, which summarizes many of the points made in the workshop (for example, The Law of Lesser-of-Evil Choices: "All methods are flawed. But different methods are flawed differently. In research, as in politics, very often we are faced with choices among alternatives all of which are seriously flawed").

**THEME:** Innovative Ways of Cumulating Evidence

**ISSUES:** How can findings from diverse studies of similar organizational phenomena be cumulated to yield trustworthy and general conclusions? Are conflicting results across studies real or artificial? How can we know?

**AUTHORS:**

Jack Hunter (coordinator of the group) is a Professor of Psychology and of Mathematics at Michigan State University. His primary work in the past few years has been in personnel selection: test fairness, test utility, and test validity. He has ongoing interests in mathematical models, psychometric theory, and path analysis.

Frank Schmidt is Research Psychologist with the U.S. Office of Personnel Management, and research professor at George Washington University. He has applied the methods developed jointly with Hunter to problems in employment test validity, fairness of tests for minorities, and halo in ratings of performance.

Gregg Jackson is on the staff of the Washington Center for the Study of Services. He has long-standing interest and experience in methods for cumulating evidence across different research studies.

**PRODUCTS:**

The members of this group have produced a single, integrated monograph that presents a new approach to the integration of research findings across studies. The premise of the monograph is that many seemingly conflicting findings in the research literature may be artifactual--due to sampling error and other artifacts rather than to systematic differences in population or organizational characteristics. Six different methods for integrating results are examined and assessed, in order of their efficacy:

1. Traditional narrative procedures that take each study at face value and attempt to find an overarching model that

reconciles the findings. The authors find little of merit in this approach.

2. The "voting method," in which significant and nonsignificant findings are tabulated. This method is biased in favor of large sample sizes--and may underestimate effect sizes. It ignores the fact that studies with different sample sizes have a wholly different meaning for "significant," leaving unknown the size of the effects obtained.
3. Cumulating probability values across studies. Again, little is learned using this method about effect size because probability values are so heavily affected by sample size.
4. Glass's meta-analysis method, involving the quantitative cumulation and analysis of descriptive statistics across studies. Here effect sizes are emphasized rather than significance levels, but there are still some problems with the approach.
5. The Schmidt-Hunter meta-analysis method builds upon the Glass methodology and goes beyond it in two ways: (1) the variance across studies is corrected for sampling error and (2) the estimated effect sizes are corrected for statistical artifacts such as error of measurement and restriction in range to yield more accurate estimates of their true magnitudes.
6. State-of-the-art meta-analysis, which is the most complete procedure now known. This procedure extends the meta-analysis method to experimental studies, and provides means for regressing study effect sizes on study characteristics.

Formulas for the Schmidt-Hunter procedures are provided, and worked examples are presented to help the reader learn how appropriately to use these new methodologies for reviewing the literature and for developing new conceptual models based on findings from a diverse set of research studies.

**THEME:** Making It Happen: Designing Research With Implementation in Mind

**ISSUES:** How can organizational research be designed so as to create more widespread use of these results by the decision makers? What specific skills of the researchers are critical to making implementation happen? How can researchers develop these skills?

**AUTHORS:**

Milton Hake (coordinator of the group) is Professor of Psychology at the Ohio State University, and directed its Industrial and Organizational Psychology program for the last ten years. His major research interests have been--and continue to be--at the intersection of the world of scholarship and the world of action.

Melvin Sorcher is Director of Management Development at Richardson-Vicks Inc. His research interests in recent years have focused on the development of "behavior modeling"--a now widely-used strategy for training managers how to deal more competently with their associates and subordinates.

Michael Beer is a Professor at the Harvard Business School. He recently has completed a book on organizational development that integrates scholarly knowledge about change processes with the techniques required for carrying out those changes in complex organizations.

**PRODUCTS:**

This monograph emphasizes a number of hands-on cases, exercises and role-plays aimed at increasing awareness of the key issues involved in competent action-oriented research, and at building skills in carrying out projects that aspire to make a difference in the organizations where they are done.

The monograph opens with an overview (by Hake) of the educational and expository materials to come. Then comes a specially

designed case which describes in detail the relationship between a researcher and the organization in which he hopes to conduct his research. The case highlights a number of dilemmas and problems that affect whether or not the research, as designed, would result in implementation of the research findings. Beer provides a set of teaching notes for use in analyzing the case and exploring its implications.

Next, the monograph focuses on specific behaviors that researchers can use to help get research-based ideas implemented in organizations. Two "entry" issues are highlighted: what to do when management actively seeks assistance from the researcher, and what to do when approaching management for cooperation in a research project of one's own initiative. Educational materials include a number of situations in which users of the monograph materials are invited to role play the researcher in dealing with such issues. Again, teaching notes are provided.

The monograph closes with annotated transcripts of discussion among the presenters and participants at the March 1981 conference that highlight the key issues involved in the design of research that can generate constructive organizational change.

**THEME:** Innovative Uses of Quantitative Techniques in Organizational Research

**ISSUES:** What quantitative techniques are available for analyzing nonexperimental research? What can each technique give the organizational researcher? How useful are such techniques as linear causal models, path analysis and others? What conditions must be met for these techniques to be effectively and appropriately used?

**AUTHORS:**

Lawrence James (coordinator of the group) is Professor in the School of Psychology at Georgia Institute of Technology. His research interests include cognition and perception as they affect behavior in organizations, leadership, and quantitative techniques in field research.

Stanley Mulaik is Professor in the School of Psychology at Georgia Institute of Technology. He has published work on multivariate statistical analysis, including work on factor analytic models and on linear causal modeling with latent variables.

Jeanne Brett is Associate Professor of Organizational Behavior at the Kellogg Graduate School of Management, Northwestern University. Her primary research interests are the impact of work on the family, and conflict management in industrial relations.

**PRODUCTS:**

This monograph discusses the use of confirmatory analysis and structural models in nonexperimental research, and provides practical guides for deciding when and how to employ such techniques. Exercises are provided that demonstrate the process of translating verbal models into path diagrams, and theoretical models into quantitative models and equations.

A special feature of the monograph is its emphasis on the conditions that must be met in order to make strong causal inferences

from nonexperimental data. The authors provide some new tests that can be used by readers to determine whether or not their data meet these conditions.

Throughout, the monograph highlights logical issues in the use of confirmatory analysis, and emphasizes the importance of strong theory as a prerequisite for appropriate use of the technique. Examples and alternative analytic strategies useful in different circumstances are provided.



## WHAT HAPPENED

The work around the six themes was developed as a part of a two-year project titled, "Innovations in Methodology for Studying Organizations."

Professional direction. The idea for the project originated with the Executive Committee of Division 14 (Industrial and Organizational Psychology) of the American Psychological Association. In 1977, the president of the division (John P. Campbell) appointed a committee representing a variety of research traditions in the study of organizations to carry the project forward. Members were: Thomas J. Bouchard (University of Minnesota), J. Richard Hackman (chair; Yale University), Joseph L. Moses (American Telephone and Telegraph Company), Barry M. Staw (University of California, Berkeley), Victor H. Vroom (Yale University), and Karl E. Weick (Cornell University). Joel T. Campbell (Educational Testing Service) and David L. DeVries (Center for Creative Leadership) subsequently joined the committee. The Center for Creative Leadership contracted with the committee to provide technical and administrative support for the project, under the direction of David L. DeVries and Ann M. Morrison.

Goals. The project was focused on creating several outcomes. The first involved developing and disseminating new research methodologies of real use in understanding and changing what happens in organizations. A second purpose was to increase the diversity of methods in use in research on organizations, with the more specific hope of getting researchers in various disciplines to expand their methodological repertoires beyond those dominant in their particular discipline. A further goal was to create multiple, informal networks of organizational researchers, whose members use innovative methodologies in their own research and encourage others to do the same. The overall aspiration of the project was to increase the usefulness of research methodologies for generating excellent theory about organizational phenomena, and for improving the quality of professional practice in organizations.

Key events. To achieve these goals, the committee launched a three-phase process. First, a three-person work group was selected for each of the six themes. These groups were given a general mandate, and the time and the support to develop ideas for generating and sharing methodological innovations in their topic. These six shared the results of their collaborative work in a three-day conference for active organizational researchers, held in March 1981 at the Center for Creative Leadership. Eighty researchers participated in the conference, representing a wide range of disciplines. Based on feedback received at the conference, each of the groups revised its materials to prepare them for wider dissemination.

Funding. Support for the two-year project was provided jointly by the Organizational Effectiveness Research Program of the Office of Naval Research (Bert T. King, Scientific Officer), and the School Management and Organizational Studies Unit of the National Institute of Education (Fritz Mulhauser, Scientific Officer).

### HOW TO GET MORE INFORMATION

The materials developed for each of the six themes are available through several sources. Anyone interested in reviewing the materials or pursuing the ideas discussed during the March Conference should contact the appropriate person from the following list.

- A small library has been created that contains manuscripts, handouts, and audio-visual materials used in each workshop. The Center for Creative Leadership has arranged library loans and will continue to loan out these materials through March 1982. Anyone may borrow the materials for one or more of the workshops for a week, as they are available. Because the list of interested borrowers is growing, the waiting time for these materials may be several months. There is no charge for the materials; borrowers pay only return postage and insurance. To be added to the list of borrowers, or to get more information, contact Ann M. Morrison, Manager of Research Projects, CCL, P.O. Box P-1, Greensboro, NC 27402 (phone 919/288-7210).
- The revised Conference materials will be published as a series by Sage Publications, Inc. The series will consist of six paperback books containing manuscript summaries from each of the six workshops. These books can be used for graduate and undergraduate methodology courses in a variety of disciplines.

The publication date is expected to be in mid-1982. For more information contact:

Sage Publications, Inc.  
275 South Beverly Drive  
Beverly Hills, CA 90212

- An "Innovations Network" has been formed as a way to further explore the research methodologies presented at the Conference. Six people who participated in the Conference, one for each theme, have agreed to serve as contacts for this network. Each contact person will help connect people interested in the topic and coordinate exchange of related information, such as current or upcoming research projects, funding sources, and ideas about novel research techniques.

The contact people are:

Innovative Ways of Collecting and Analyzing Qualitative Data:  
 Dr. Helen Schwartzman, Institute for Juvenile Research, 1140  
 S. Paulina Street, Chicago, IL 60612 313/996-1880/1874

Innovative Ways to Find and Define Research Problems and Questions: Dr. John P. Campbell, Department of Psychology,  
 Elliott Hall, University of Minnesota, Minneapolis, MN 55455  
 612/373-3413

Better Ways of Making "Judgment Calls" in Methodological Decision Making: Dr. Philip J. Runkel, College of Education,  
 University of Oregon, Eugene, OR 97403 503/686-5067

Innovative Ways of Cumulating Evidence: Dr. Frank Schmidt,  
 U.S. Office of Personnel Management, 19th and E Street, NW  
 (Room 3330), Washington, DC 20415 202/632-7610

Making it Happen: Designing Research with Implementation in Mind: Dr. Jarold R. Niven, The Boeing Company, P.O. Box 3707  
 (M.S. 10-28), Seattle, WA 98124 206/655-2714

Innovative Uses of Quantitative Techniques in Organizational Research: Dr. Larry James, School of Psychology, Georgia  
 Institute of Technology, Atlanta, GA 30332 817/921-7685

