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memo

To: PES Staff

From: Howard Bloom

Date: December 2, 1999

Re: Selected Books for Reference

The following is an annotated list of books that I would recommend as references on methodological topics that are relevant to the field of program evaluation. Some of these books may now be in later editions and others may be out of print but available from libraries.

Please note that my list is by no means exhaustive. It simply highlights books that I have found to be especially helpful for my work or my teaching. Also note, that because of the wide range of disciplines represented by the authors involved, the books listed are written in many different "languages". Lastly, note that although it goes without saying (but I will say it anyway), the comments about each book reflect my own opinions and do not necessarily represent the position of any organization.

#### **Methodology for Evaluation and Research**

Campbell, Donald T. and Julian C. Stanley (1966) Experimental and Quasiexperimental Designs for Research (Chicago: Rand McNally).

"Campbell and Stanley" is probably out of print, and is a little hard to follow in places. Nevertheless, it is the early statement of the basic research design principles which provide the methodological core of evaluation research. Thus, it is well-worth reading in the original.

### Cook, Thomas and Donald T. Campbell (1979) *Quasi-Experimental Design and Analysis Issues for Field Settings* (Chicago: Rand McNally).

"Cook and Campbell" is the second-generation foundation document for program evaluation methodology and provides a more extensive treatment of the issues addressed by "Campbell and Stanley". The book probably is also be out of print, but a completely revised new edition will be released soon.

### Rossi, Peter H., Howard E. Freeman and Mark Lipsey (1999) *Evaluation: A Systematic Approach* (Thousand Oaks, CA: Sage Publications).

"Rossi, Freeman and (now) Lipsey" is the newest edition of probably the most widelyused introductory textbook on program evaluation. In addition to dealing with methodological issues, the book also addresses topics such as the history of evaluation, the role of evaluation, different forms of evaluation, the implementation of evaluation studies, and the use of evaluation findings.

# Babbe, Earl (1989) *The Practice of Social Research* 5<sup>th</sup> edition (Belmont, CA: Wadsworth Publishing Co.).

"Babbe" is an exceptionally clear and insightful introductory textbook on social science research methods (not just program evaluation). I have used this book for many years in an introductory research methods class for Ph.D. students and I learned something new and important every time that I reread it (which was every year). Don't let the apparent simplicity of this book keep you from thinking very carefully about what it says.

#### **Econometrics and Statistics**

The books in this section present the basic (and not so basic) quantitative tools needed to analyze program evaluation data. These books do not focus directly on program evaluation, however, and they tend to over-represent econometrics relative to statistics (which reflects my background, not the field).

### Pindyck, Robert S. and Daniel L. Rubinfeld (1998) *Econometric Models and Economic Forecasts*, 4<sup>th</sup> edition (Boston: Irwin Mcgraw-Hill).

"Pindyck and Rubinfeld" is an excellent intermediate-level econometrics textbook. I have used previous editions quite successfully for teaching masters students. The book

provides clear intuition and the right amount of mathematical explanation for each issue addressed. I still use it myself for "quick refreshers" on specific topics.

Greene, William H. (1997) *Econometric Analysis*, 3<sup>rd</sup> edition (Upper Saddle River, New Jersey: Prentice Hall).

"Greene" is used widely as a textbook for Ph.D.- level econometrics courses and is an invaluable reference source. What I find most helpful about the book is: (1) its focus on methods for applied research (not just econometric theory), (2) the strong intuition provided by both its text and its math, and (3) the fact that its author has developed and closely supports a widely-used software package (LIMDEP), which keeps him well-versed in relevant applications and personally accessible to applied researchers.

Bryck, Anthony S. and Stephen W. Raudenbush (1992) *Hierarchical Linear Models: Applications and Data Analysis Methods* (Newbury Park, CA: Sage Publications).

"Bryck and Raudenbush" provides a clear introduction to the theory and application of hierarchical or multi-level modeling. This body of concepts, models and estimation procedures is taking the field of educational research and evaluation by storm. It provides an effective way to deal with: (1) how multiple observations are clustered by individuals (for longitudinal or panel data), (2) how individuals are clustered within groups (e.g. students in classes), and (3) how groups are clustered within higher-level groups (e.g. classes in schools or schools within school districts). The authors have developed and closely support a related software package (HLM) and thus, are in constant communication with applied researchers.

#### **Experimental Design, Implementation and Analysis**

Boruch, Robert F. (1997) *Randomized Experiments for Planning and Evaluation: A Practical Guide* (Thousand Oaks, CA: Sage Publications).

This book provides a clear and accessible discussion of the rationale, role, design implementation, and use of social experiments. It's author has been very influential in promoting the approach both in the US and abroad, and has published widely on the full range of issues involved. Thus, the book presents important insights into issues such as: (1) the ethics of random assignment, (2) arguments for and against using this approach, and (3) where, how, when, by whom, and to what end it has been used.

## Orr, Larry L. (1999) *Social Experiments: Evaluating Public Programs with Experimental Methods* (Thousand Oaks, CA: Sage Publications).

This book provides an intermediate-level discussion of the design, implementation and analysis of social experiments. It's author has designed and implemented some of the largest and most complex social experiments ever conducted. The book effectively deals both with both operational issues and analytic concerns and is based on a first-hand knowledge of both. Perhaps most useful is the fact that the book presents ways to address design and analysis issues that arise frequently in social experiments. It does so in ways that are both readily understandable and detailed enough to enable readers to use (not just appreciate) what is presented.

### Lipsey, Mark W. (1990) *Design Sensitivity: Statistical Power for Experimental Research* (Newbury Park, CA: Sage Publications).

This book grows out of the author's extensive research on the statistical power of past randomized experiments (or their lack thereof). It introduces important concepts in the analysis of statistical power (e.g. "effect size"); it demonstrates the importance of statistical power for social experiments (e.g. by illustrating how low power has limited past research), and it provides useful conceptual and empirical guidance for judging the adequacy of the power of proposed experimental designs.

#### **Benefit-Cost Analysis and Cost-Effectiveness Analysis**

Gramlich, Edward M. (1990) *A Guide to Benefit-Cost Analysis* (Englewood Cliffs, NJ: Prentice-Hall, Inc.).

This book provides an intermediate-level treatment of benefit-cost analysis—a key analytic framework for examining the policy implications of program evaluations. The author is both an established academic and an active participant in the policy world. The book presents the micro-economic foundation of benefit-cost analysis and then explains how to conduct each of the steps involved: (1) placing monetary values on key outcomes, (2) discounting for differences in their timing, (3) summarizing these findings as net benefits or benefit cost ratios, and (4) accounting for their distributional implications. The book also has chapters on the use of benefit-cost analysis in different public policy areas and the analytic issues which arise in each.

### Levin, Henry M. (1983) *Cost-Effectiveness: A Primer* (Beverly Hills, CA: Sage Publications).

In this book, Hank Levin presents the basics of cost-effectiveness analysis. The fundamental difference between cost-effectiveness analysis and benefit-cost analysis (aside from the placement of costs in their names) is that the former compares program costs in monetary terms to program impacts in their natural units (e.g. test scores, graduation rates, etc.), whereas the latter compares both impacts and costs in monetary terms. The author of this book, is a well-established educational researcher and the founder of Accelerated Schools, a national school reform movement. His presentation is clear, easy to follow and relevant for educational evaluators.

# Greenberg, David H. and Ute Appenzeller (1998) *Cost Analysis Step by Step* (New York: Manpower Demonstration Research Corporation).

This book provides a user-friendly walk through the details of how to measure the <u>costs</u> of welfare and employment programs. The first author has written widely on the use of randomized experiments and has conducted numerous training programs on benefit-cost and cost-effectiveness analysis. Provided with the book is a diskette which contains the data for exercises that are discussed. Thus, readers can easily replicate and extend these analyses. Although the book's substantive focus is on welfare and employment programs, it illustrates important analytic principles that apply to other policy areas.

#### **Meta-Analysis**

Hedges, Larry V. and Ingram Olkin (1985) *Statistical Methods for Meta-Analysis* (Boston: Academic Press, Inc.)

"Hedges and Olkin" is an intermediate-level textbook in meta-analysis—the relatively new and somewhat controversial science of pooling findings across studies. The book is written for readers with at least a solid masters-level understanding of statistics. It starts with first principles and works through all of the intermediate steps needed to provide readers with what they need to know to conduct a rigorous meta-analysis. Thus, it is fairly self-contained. The first author is an educational researcher and one of the most prominent figures in the field of meta-analysis. Thus, both the context and content of the book work well for educational evaluators.

## Cooper, Harris and Larry V. Hedges, eds. (1994) *The Handbook of Research Synthesis* (New York: Russell Sage Foundation).

This book is a compendium of articles written by major figures in the field of metaanalysis. Each article addresses a specific methodological topic in some detail. Thus the combination of this book and the preceding one provides an effective entre to the field for readers with a background and experience in applied statistical analysis but no prior exposure to meta-analysis.