Introduction

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Welcome to the third edition of the *Handbook of Research Methods in Social and Personality Psychology*. The first two editions of this handbook – published in 2000 and 2014 – have played an important role in widening access to and utilization of cutting-edge methods in the field. Useful as these volumes have been, the science of personality/social psychology never sleeps when it comes to developing new and improved research methods. And so herewith we present a third edition, designed to capture some of the most influential and promising new methodological advances in our field.

This edition covers both traditional methodological topics that have seen advances in recent years and novel approaches of recent vintage. There are, of course, many other topics that could have been included. We've chosen content that we believe will be most relevant to the largest proportion of new scholars in the field. This is not to suggest that topics omitted from this edition are less important – in fact, with the help of Cambridge University Press and the consent of the authors, we've made several of the still timely chapters from the second edition freely available on their website (address needed). Like the current chapters, these should be considered essential elements in a survey of the field's methodological state of the art and might well be incorporated into a methods-course syllabus.

Methods are the bread and butter of science: more than just defining what is possible, they suggest what can be learned. It goes without saying that much of what appears in journals today asks questions that could not have been imagined, much less investigated, by earlier researchers.

Tony Greenwald's (2012, 99) observation that there is "a much greater frequency of Nobel science awards for contributions to method than for contributions to theory" still rings true. Methods open the door to questions, and questions make it possible to advance theory. Our fondest wish is that this book will inspire you, the researcher, to come up with and pursue new and better questions.

How Can I Toggle between Advancing Theory and Using New Methods?

The methods in this handbook are not intended to replace theories, but rather to provide you with a guide to optimally test them. To this end, most chapters toggle between theory and method, presenting them as two sides of the same coin. As Greenwald notes, the history of psychology is full of such examples of theories advancing with the advent of new methods, and vice versa. For example, relationships scientists were able to develop and test complex theories of how partners influence one another over time once advancements were made in multilevel modeling generally, and dyadic analysis more specifically. But those advances happened out of necessity, once scholars realized the importance of handling issues such as nonindependence of data properly; without doing so, it was easy to make mistakes in drawing conclusions from the data. As another example, advances in psychophysiologic measurement have enabled researchers to move beyond the lab to the field to collect cardiovascular data using watches and phone apps; questions such as how

basic stressors impact people's health across multiple social contexts and in multiple countries can now be studied in a more ecologically valid manner. And with these tools being widely available, more and more researchers can now think even bigger about the contexts in which they can study physiological processes – from the classroom to the operating room.

Parts I and II of the handbook introduce readers to basic issues in the science and design of research. These might be considered "what you need to know before starting." Parts III and IV introduce the reader to new methodological and statistical procedures while considering the role of theory development in their application. As you read these sections, we urge you to ask yourself, "Will this be the best method available to test my question? Will this analysis strategy allow me to ask what I need to ask to advance my theory? What will this method allow me to learn that I couldn't have done with other methods?" It can be tempting, especially in the early stages of becoming a scholar, to lean into sexy new methods, to let your research topic be guided by a trendy methodological approach that you're excited about. Yes, knowing about new methods opens up the possibilities of what can be tested, but leading with a good theoretical question, especially one that may lead to useful applications, is good practice. Methodological approaches change all of the time, but, to quote Lewin's well-known dictum, there's nothing so practical as a good theory.

In This Era of Rapid Change, How Can I Possibly Keep Up?

One challenge all researchers face is that methodological and statistical advances are happening at a rapid, and perhaps expanding, pace. We three editors struggled to create a handbook that is both cutting-edge in the approaches covered, and also likely to stand the test of time. To these ends, our goal is to expose the reader to as many methods as possible, while also covering the "tried and true" principles of methodological skill building. For example, since the prior edition of this handbook, the age of massive data began - a point made clearly in Kosinski's chapter in this handbook. Scholars can now test big questions with huge multinational samples, such as how emotions spread throughout social networks, who we are attracted to, and what gives rise to misinformation contagion. As we were finalizing this handbook, the advent of generative AI happened. AI tools will shape not only the types of question we can ask as scientists, but also how we go about developing materials, collecting and analyzing data, and even writing up our scientific findings. Issues of ethics will surely come up as these tools develop. And with these new methods, advances in statistical procedures continue. Machine learning and computational modeling - topics covered in Part IV - allow scholars to examine dynamic processes that unfold naturally over time. Using "data-driven" statistical approaches such as these can help circumvent some of the ethical issues around questionable research practices that have entered the zeitgeist since the prior edition of this handbook. On top of these changes, most analyses these days are conducted using packages in R, Python, MPlus, and SPSS, many of which can be run with little knowledge of what is going on "under the hood." It can be all too easy to run code without knowing what it does; fighting this temptation is essential as you develop your methodological and analytical skills.

In short, there's a lot you can do without knowing the classic issues of psychometrics and study design – basic things like principles of construct validity and scale construction. We think the opposite is true: the basic building blocks covered in Parts I and II of this handbook are essential to learn during this time of constant change. This knowledge will anchor your understanding of methodological developments, and give you a more critical eye when encountering something new.

How Should You Read This Handbook?

When deciding how to organize this handbook, we adopted the perspective of a new researcher – someone with little experience conducting or running studies, who is in the early stages of formal graduate-level education. This book is designed to guide the reader through that process - from the earliest stages of thinking about research, when foundational issues of ethics and replication are top of mind, through the design, implementation, and analysis stages. The handbook deliberately starts out broad, addressing big-picture issues relevant to all new scholars interested in the study of personality and social psychology, regardless of topic. The chapters in the middle -Parts III and IV – are more bespoke, addressing specific methodological and statistical procedures. Here, our goal is to expose the reader to cutting-edge methods and statistical procedures that have the potential to dramatically shape the types of question you can ask, and how you go about testing them. We aimed for as much breadth as possible, given that most graduate programs offer expertise in only a handful of areas.

The first part of the handbook – foundational issues in psychological science – covers basic issues around ethics in conducting research, replication, how to conduct team science, and how to conduct research that captures multicultural and multinational samples. We recommend reading this part first. It requires no prior knowledge or expertise in conducting experimental research.

The second part of the book – basic methodological considerations – covers the basics of design and validity – beginning with essential concepts of validity and experimentation, then moving to quasi-experimental design and field methods, which take the researcher out of the lab and into uncharted (real-world) territory.

The third part of the handbook assumes a basic knowledge of experimental method and design,

along with consideration of ethics and replication. Here, the authors of the chapters provide a deep dive into several popular methodological approaches at the forefront of cutting-edge research. These chapters need not be read in order (as we suggest with the first two parts), but rather can be turned to as the researcher begins to think through different methodological options.

The fourth and final part is aimed at the reader who has designed a study and collected the data, and is now ready for data analysis. Like Part III, we opted for breadth in presenting multiple data-analytic approaches, all of which consider the role of theory in data analysis. We advise novice researchers to read these chapters when planning their research, and not just after the data are in hand; knowing what your analyses will need, and being aware of what they can do, may dictate how you ask your questions.

Concluding Remarks

One of the most exciting times in a researcher's career is the early stage, when ideas are free-flowing, the topics available for study seem boundless, and the prospects for contributing to knowledge are animating. Our goal in editing this handbook has been to help the reader maintain that sense of excitement, all while introducing them to new concepts in a hands-on way that is not meant to intimidate, but rather to create opportunities and to inspire. And if you don't learn it all in one pass, that's okay. In fact, it's expected. As scholars who've been at it for a while, the three of us still become aware of new methods often. The learning never ends!

Reference

Greenwald, A. G. (2012). There Is Nothing So Theoretical as a Good Method. *Perspectives on Psychological Science*, 7, 99–108.