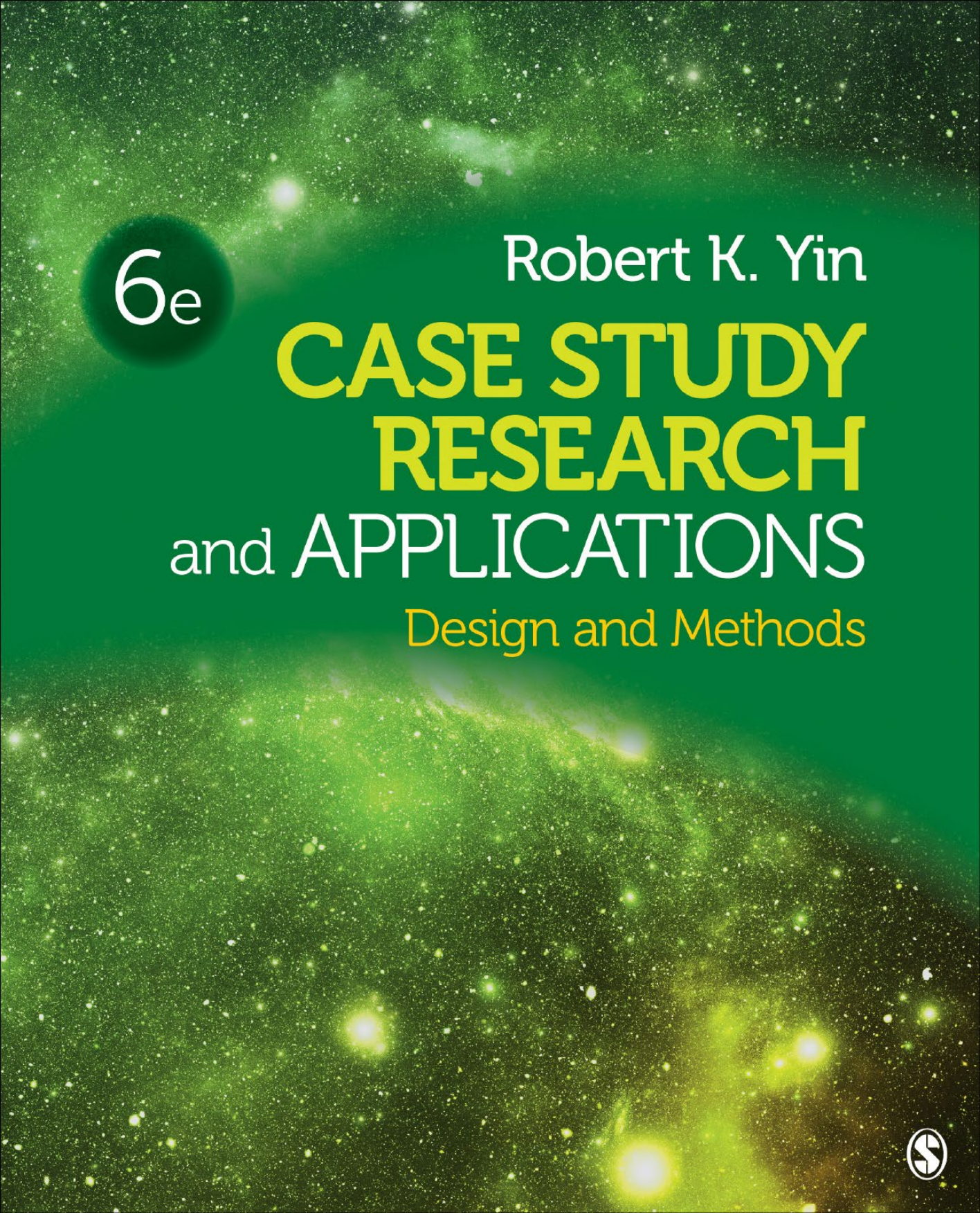

6e
Robert K. Yin
CASE STUDY RESEARCH
and APPLICATIONS
Design and Methods

# Case Study Research and Applications

## Sixth Edition

# BRIEF CONTENTS

# DETAILED CONTENTS

# FOREWORD

It is a privilege to provide the foreword for this fine book. It epitomizes a research method for attempting valid inferences from events outside the laboratory while at the same time retaining the goals of knowledge shared with laboratory science.

More and more I have come to the conclusion that the core of the scientific method is not experimentation per se but rather the strategy connoted by the phrase "plausible rival hypotheses." This strategy may start its puzzle solving with evidence, or it may start with hypothesis. Rather than presenting this hypothesis or evidence in the context-independent manner of positivistic confirmation (or even of postpositivistic corroboration), it is presented instead in extended networks of implications that (although never complete) are nonetheless crucial to its scientific evaluation.

This strategy includes making explicit other implications of the hypotheses for other available data and reporting how these fit. It also includes seeking out rival explanations of the focal evidence and examining their plausibility. The plausibility of these rivals is usually reduced by ramification extinction, that is, by looking at their other implications on other data sets and seeing how well these fit. How far these two potentially endless tasks are carried depends on the scientific community of the time and what implications and plausible rival hypotheses have been made explicit. It is on such bases that successful scientific communities achieve effective consensus and cumulative achievements, without ever reaching foundational proof. Yet, these characteristics of the successful sciences were grossly neglected by the logical positivists and are underpracticed by the social sciences, quantitative or qualitative.

Such checking by other implications and the ramification-extinction of rival hypotheses also characterizes validity-seeking research in the humanities, including the hermeneutics of Schleiermacher, Dilthey, Hirst, Habermas, and current scholarship on the interpretation of ancient texts. Similarly, the strategy is as available for a historian's conjectures about a specific event as for a scientist's assertion of a causal law. It is tragic that major movements in the social sciences are using the term *hermeneutics* to connote giving up on the goal of validity and abandoning disputation as to who has got it right. Thus, in addition to the quantitative and quasi-experimental case study approach that Yin teaches, our social science methodological armamentarium also needs a humanistic validity-seeking case study methodology that, although making no use of quantification or tests of significance, would still work on the same questions and share the same goals of knowledge.

As versions of this plausible rival hypotheses strategy, there are two paradigms of the experimental method that social scientists may emulate. By training, we are apt to think first of the randomized-assignment-to-treatments model coming to us from agricultural experimentation stations, psychological laboratories, randomized trials of medical and pharmaceutical research, and the statistician's mathematical models. Randomization purports to control an infinite number of rival hypotheses *without specifying what any of them are.* Randomized assignment never completely controls these rivals but renders them implausible to a degree estimated by the statistical model.

The other and older paradigm comes from physical science laboratories and is epitomized by experimental isolation and laboratory control. Here are the insulated and lead-shielded walls; the controls for pressure, temperature, and moisture; the achievement of vacuums; and so on. This older tradition controls for a relatively few but explicitly specified rival hypotheses. These are never controlled perfectly, but well enough to render them implausible. Which rival hypotheses are controlled for is a function of the disputations current in the scientific community at the time. Later, in retrospect, it may be seen that other controls were needed.

The case study approach as presented here, and quasi-experimentation more generally, is more similar to the experimental isolation paradigm than to the randomized-assignment-to-treatments model in that each rival hypothesis must be specified and specifically controlled for. The degree of certainty or consensus that the scientific community is able to achieve will usually be less in out-of-doors social science, due to the lesser degree of plausibility-reduction of rival hypotheses that is likely to be achieved. The inability to replicate at will (and with variations designed to rule out specific rivals) is part of the problem. We should use those singular-event case studies (which can never be replicated) to their fullest, but we should also be alert for opportunities to do intentionally replicated case studies.

Given Robert Yin's background (PhD in experimental psychology, with a dozen publications in that field), his insistence that the case study method be done in conformity with science's goals and methods is perhaps not surprising. But such training and career choice are usually accompanied by an intolerance of the ambiguities of nonlaboratory settings. I like to believe that this shift was facilitated by his laboratory research on that most hard-to-specify stimulus, the human face, and that this experience provided awareness of the crucial role of pattern and context in achieving knowledge.

This valuable background has not kept him from thoroughly immersing himself in the classic social science case studies and becoming in the process a leader of nonlaboratory social science methodology. I know of no comparable text. It meets a long-standing need. I am confident that it will become a standard text in social science research methods courses.

—Donald T. Campbell
Bethlehem, Pennsylvania

# PREFACE

## SPOTLIGHTING "CASE STUDY RESEARCH"

At the time of the first edition of this book (1984), although popular versions of case studies were plentiful, case study *research* was an obscure mode of inquiry, not well understood. Over the years, both awareness and practice have changed. You and many others have increasingly recognized the value of case study *research,* and it now has gained a spotlight within social science.

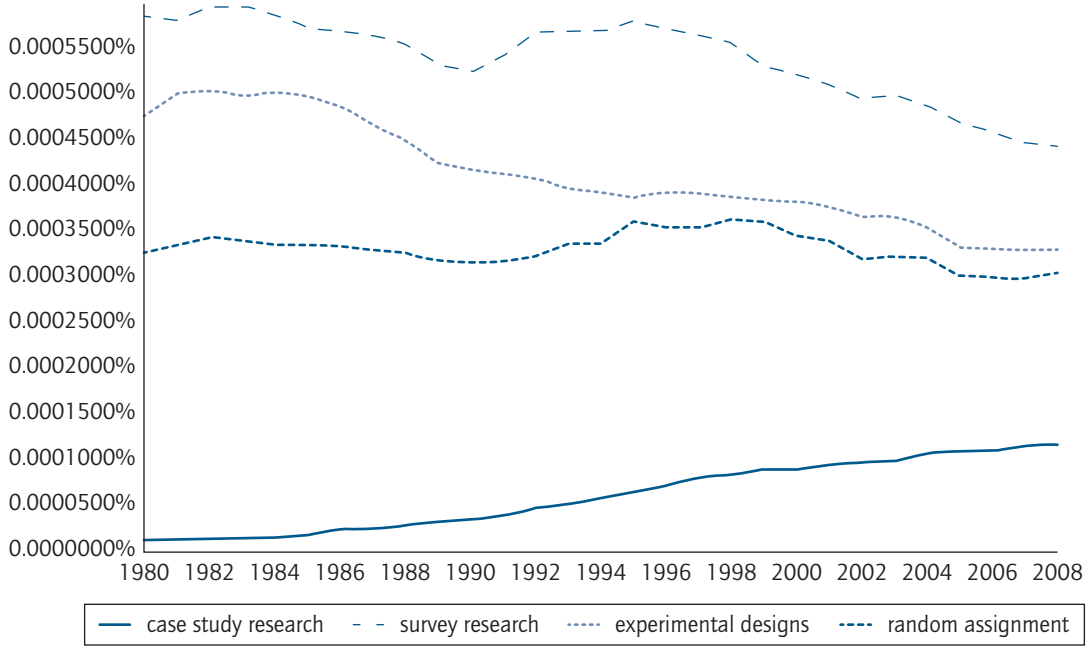
The spotlight comes from the sheer use of the term "case study research" (not just "case studies") in published books. The previous (fifth) edition of this book called attention to a rising trend in such use. Google's *Ngram Viewer* had provided data on the frequency of the term's appearance in publications from 1980 to 2008,[1] compared with the appearance of three alternatives: "survey research," "experimental designs," and "random assignment."[2] Figure Pref.1, reproduced from the fifth edition, compares the four terms.

In the figure, the frequency for "case study research" follows an upward trend, in contrast to the other three terms. Even though the absolute level of the trend is still lower than those of the other terms, the others are trending in the opposite direction. The contrasting trends may surprise you (as it did me), because of the decade-long hullabaloo at that time over random assignment designs as the preferred "gold standard" for doing any social science research.[3] Notably, the hullabaloo had been accompanied by explicit attempts to downgrade other types of social science research—by giving little or no priority for using federal funds to support studies using any of these other methods. Private foundations, as well as other social science funding sources, followed suit, making support difficult for research not using random assignment designs.

To my knowledge, the 1980–2008 data as well as Google's *Ngram Viewer* had not been updated by this sixth edition's publication time. Thus, trends may have changed since 2008 and may have shifted in some unknown way. However, another Google source provided a different type of more recent data that seems to support a continuing spotlight on case study research.

The data represent citation frequencies from Google *Scholar* (see http://blogs.lse.ac.uk/impactofsocialsciences/2016/05/12/what-are-the-most-cited-publications-in-the-social-sciences-according-to-google-scholar/). These data show that the present

**FIGURE PREF.1 ● Frequency of Four Methodological Terms Appearing in Published Books, 1980–2008**




*Source:* *Google's Ngram Viewer* (http://books.google.com/ngrams), accessed March 2012.

book, through all its editions since 1984, placed second (!) on a list of the "10 most cited methodology books in the social sciences" (see Figure Pref.2, which originally appeared as Table 3 in the cited blog).

The tenfold list includes *all* social science methods books—qualitative *and quantitative* (Green, 2016). To place second, this book had well over 100,000 citations, which were 20,000 more than that of the third-place book.[4] (Note that all the books on the list are more than 25 years old; had the analysis normalized the totals by the number of years of a book's availability, more recent books might have had a fairer chance to be included.) So, whether mentioning "case study research" is still on an upward trend or not (the original trend from Google *Ngram*), a lot of people have been citing "case study research" when they cite this book and its title (the more recent data from Google *Scholar*). Along similar lines, 15 different academic disciplines and practicing professions now have at least one specialized work focusing on doing case study research in their particular discipline or profession (see Figure 1.1, Chapter 1).

**FIGURE PREF.2 ● Ten Most Cited Methodology Books in the Social Sciences**

| Book | Author(s) | Date | Citations |
|---|---|---|---|
| *Applied Multiple Regression/ Correlation Analysis for the Behavioral Sciences* | J. Cohen, P. Cohen, S. West, and L. Aiken | 1975 | 131,033 |
| *Case Study Research: Designs and Methods* | Robert Yin | 1984 | 107,931 |
| *Psychometric Theory* | Jim Nunnally | 1967 | 80,196 |
| *The Discovery of Grounded Theory: Strategies for Qualitative Research* | Barney Glaser and Anselm Strauss | 1967 | 78,385 |
| *Multivariate Data Analysis* | J. F. Hair, R. E. Anderson and R. L. Tatham | 1979 | 70,700 |
| *Qualitative Data Analysis* | Matthew Miles and A. Michael Huberman | 1984 | 59,829 |
| *Using Multivariate Statistics* | Barbara Tabachnick and Linda Fidell | 1989 | 57,324 |
| *Econometric Analysis* | William Greene | 1990 | 54,524 |
| *An Introduction to Probability Theory and Its Applications* | William Feller | 1950 | 51,825 |
| *Naturalistic Inquiry* | Yvonna Lincoln and Egon Guba | 1985 | 51,169 |

*Source:* Data from Google *Scholar*, compiled by Green (2016).

## THE SIXTH EDITION: CASE STUDY RESEARCH *AND APPLICATIONS*

*Special to this sixth edition.* The spotlight on "case study research" suggested the desirability of a special effort in creating the sixth edition of this book—if nothing else, something to increase its breadth and usefulness to you. Thus, if you have followed the book's

previous editions, you will immediately note that, by comparison, the sixth edition has an augmented title: "Case Study Research *and Applications*." Now included in the sixth edition are 11 substantial case study applications. Although versions of these applications had appeared in earlier works (Yin, 2004, 2005, 2012a), the goal has been to put these materials into your hands in a single publication, along with a revised and much updated version of the material in the fifth edition.

The inclusion of the applications responds to requests and suggestions by readers and reviewers of earlier editions. In addition to the methodological ideas in the earlier editions, the readers always had wanted to "see how it's done." Even though every earlier edition (including this one) had contained numerous BOXES, representing concrete and exemplary examples of case studies or case study materials, the BOXES were only brief summaries. They were aimed at highlighting a specific issue in the text, but they did not reveal the breadth or depth of the original work. At the same time, the three earlier works (Yin, 2004, 2005, 2012a) did in fact consist of lengthy excerpts of actual case study applications, but readers may not have been able to connect the dots between these excerpts and the principles in the present text. So, directly including a bunch of the applications, along with the updated and revised version of the main text of this sixth edition, seemed like a useful step.

The inclusion of the 11 applications, however, comes with some trepidation. The first concerns the length of the new text. Despite having to add the new applications, the goal was to keep the full text within reasonable bounds of length *and cost*. To contribute to an offset, dropped from their appearance in the fifth edition have been Appendix C (which indexed the case studies in the BOXES) and the seven Tutorials. These supplementary materials, along with other potentially valuable slides, reprints, and briefs, all now appear on the study.sagepub.com/yin6e website that accompanies this book. The website, created for the first time in conjunction with this sixth edition, becomes your resource for gaining a more informed and personalized way of taking advantage of what case study research has to offer you.

Nevertheless, the text for the sixth edition has inevitably become longer than the previous editions. How much longer is difficult to tell, especially as of the time of this writing (prior to seeing the final page proofs and comparing their length with that of the fifth edition). My sincere hope is that the benefit from the inclusion of the applications will far outweigh the sixth edition's greater length and potential inconvenience *and cost*.

The second trepidation deals with the presentation of the applications. Some of them already were lengthy in their original form. Given the first trepidation, I had to pare down and edit these originals, in some instances to a rather aggressive degree. My sincere hope is that the original authors will not be offended by the shortening and editing of their works, as noted in the footnotes to each application. At the same

time—and especially to readers genuinely interested in the applications—by following their full citations, you do have the viable alternative of retrieving any of these works in their original form.

A third trepidation was logistical: Where to locate the applications within the sixth edition was not an easy decision. My original preference was to locate all the applications at the end of the text of the entire sixth edition. However, Sage's editors pointed out that materials located at the back of a book are frequently ignored. In contrast, one editor thought that the applications should be located within the chapters themselves, at the point where the applications were called out. I felt that such a location would totally disrupt the reading of the basic text (you would be reading the text, be interrupted by the insertion of a multiple-page application, and might then have difficulty keeping your train of thought until you found where the text picked up again). A logical compromise was to locate the applications at the end of each relevant chapter. I hope this location, along with the bleeding of the pages to help you find where the next chapter starts, will lessen the disruptiveness of the applications but still make them readily accessible to you.

*Other enhancements to this sixth edition.* Aside from the applications, much of the layout and formatting of this sixth edition will appear similar to those of the fifth edition. However, this edition gives more attention to certain topics, such as:

- More frequent reference to the opportunities for maintaining a *relativist* or *constructivist* orientation in doing your case study;
- A totally rewritten Preface, introducing an insightful "trilogy;"
- Similarly, more frequent attention to the possibilities of having your case study be part of a mixed-methods study, as such combinations appear to be increasing in frequency;
- Increased emphasis on the importance of considering rival explanations; and
- A stronger discussion of analytic generalization (Chap. 2) and of cross-case syntheses (Chap. 5).

Along with these and other enhancements, this edition also has

- An expanded list of 15 academic disciplines and practicing professions that have a work or text or devoted entirely to doing case study research in that particular field (the fifth edition only had 12 such fields)
- Scores of new citations, scores of updated citations, a sharpened glossary, and, hopefully, a sharpened terminology, especially following the discussion of the trilogy that comes next

## A TRILOGY: CASE STUDY RESEARCH, CASE STUDIES, AND THE CASE(S)

Notwithstanding the enhancements and modifications to this sixth edition, the book's central topic still rests on what I have only belatedly come to recognize as a foundational trilogy:

- Case study *research* (the *mode* of inquiry),
- Case studies (the *method* of inquiry, or *research method* used in doing case study research), and
- Case(s) (the usual *unit* of inquiry in a case study).

I don't think this trilogy suggests anything unusual, so you don't need to conjure any deep thoughts. For instance, other trilogies in social science research might include experimental research (mode), experiments (method), and subjects (units); or survey research (mode), surveys (method), and respondents (units); or historical research (mode), histories (method), and human events (units)—or, and possibly more speculatively, statistical research (mode), statistical modeling (method), and variables (units).

Regardless of the potential parallels among all these modes and methods, for case study research, the trilogy highlights two pairs of internal relationships—between "case study research" and "case study," and between "case study" and "case(s)." An intriguing by-product is that clarifying the trilogy and these pairings might help us to understand why "case studies" may still have a mixed reputation as a research method.

To examine the pairs, let's start with "case studies," which always has occupied the central position in the trilogy. Most of you entered this domain because you wanted to be an adept consumer of high-quality case studies, if not a respected producer of them. As one result, this book has increasingly attended to one of the pairings—between "case studies" and "case(s)." For instance, the past couple of editions have raised greater awareness over the important role of the "case(s)" in doing a case study, with (hopefully) better and fuller descriptions of the procedures for defining and bounding the "case(s)."

At the same time, the other pairing—between "case study research" and "case study"—has tended to be taken for granted. "Case study research" has been the main title of this book since its inception. As a direct offshoot, the body of the book has covered "case study" as a research method. These designations do not appear especially surprising or unusual.

A more recent realization, however, has been that case studies also exist *outside* the domain of case study *research*. People who do such case studies don't necessarily think of themselves as practicing a formal research method. In fact, a far more

common use of "case studies" takes place as an everyday form of exposition, appearing in newsprint, magazines, blogs, videos, and nearly every type of popular media. "Let's write a case study" or "We need to find a case" serve as common motives for engaging in such work, and just about anyone—you included—may participate. The result has been an ongoing stream of *popular case studies* that have been highly informative and useful. However, the case studies do not necessarily follow any explicit research procedures. Instead, you might think of them as *nonresearch* case studies.

In a similar manner, case studies frequently appear as supplementary materials in professional training and practicums. These have been commonly called "teaching cases." The early ones served such professions as business, law, and, later, medicine. Currently, these kinds of case studies seem to be appearing with increasing frequency and in greater variety. They are now associated with professional development courses on such topics as career counseling, psychotherapy, nursing ethics, service innovation, finance, and marketing. Thus, the classic "teaching cases" may be considered part of a broader genre that might be recognized as *teaching-practice case studies*. The purpose of these kinds of case studies has been to present information about practical situations (for training or practice) but, again, not necessarily to follow any explicit research procedures.

Taken together, the *popular case studies, as well as the teaching-practice case studies,* probably typify the kind of case studies most commonly encountered by everyone (including scholars and specialists from non–social science fields). As a result, these two types of case studies, rather than *research case studies*, likely drive everyday impressions of what constitutes a case study. People may then inadvertently be led to believe that "case studies" are a form of literary exposition or supplemental practice material and not an explicit endeavor within social science research.

In other words, the visibility and prevalence of the two types of *nonresearch* case studies may be one reason for the sometimes disparaging reputation of *research* case studies. So—if you want to do case study *research*—be aware that you need to promote openly a higher set of expectations. Research inquiries are methodic, demand an acceptable level of discipline, and should exhibit transparency about their procedures. Especially to be avoided is the notion that the main skill needed to do case study research is to be a good writer (although being an enthusiastic writer does not hurt). More important, and as stated in earlier prefaces, this book's enduring objective is to guide you and others to do case studies as a formal research method.[5]

Having distinguished among the potentially different kinds of case studies, the entirety of this book is about case studies as a *research* method. Little is said about the popular case studies or about the teaching-practice case studies. To help keep your bearings straight, the text occasionally refers to the term "*research* case studies" to set them apart from the other two types. In summary, the topic of this book is "case study research," and your way of knowing about this topic is to understand "case studies" as a research method, with the case studies of interest usually focusing on a "case" as the main unit of inquiry.

## SOME UNFINISHED BUSINESS

As with other modes of inquiry and research methods, case study research still has unfinished business that goes beyond this sixth edition. Three topics especially deserve your attention: (1) the role of plausible rival explanations, (2) case-based compared with variable-based approaches to designing and conducting case study research, and (3) the relationship between case study research and qualitative research.

*Plausible rival explanations.* The presence of rival explanations in designing and doing case study research remains critical. This sixth edition, like the previous ones, has given increasing attention to the need to address such rivals as a core part of interpreting case study findings. The challenge is to identify and address the most *plausible* rivals and not necessarily to deal with all rivals. At the same time, a broader spirit of rival thinking should pervade all your case study work, not just as the main quality control in interpreting your findings. For instance, you can express and discuss the implications of starting with a different set of research questions; similarly, you could give your reasons for choosing a particular data collection procedure instead of using some alternative or rival procedure.

The unfinished business has to do with the lack of formal procedures for rigorously testing rivals, for example,

- Whether in fact you have identified the most plausible ones or are only dealing with what later may turn out to be "red herrings" (and therefore not very compelling rivals),
- Whether you have sought the needed evidence as aggressively as possible or have unknowingly skewed your efforts in the direction of disfavoring the rival(s), and
- Whether a rival has definitively been ruled out successfully.

Currently, researchers still exercise complete discretion over these matters. Formal guidance as well as benchmarks (e.g., for successfully ruling out a rival) have yet to be developed and hence remain unfinished future business. A minimum initial step might be for *all* future case studies to address whether and how they examined rival explanations in some systematic and explicit manner—that is, similar to how methodologies now discuss "how a case was selected" or other choices in their methodological procedures. Chapter 6 of this book takes a stab at this initial step, offering a 4-point scale, to be used in your methodological discussion, simply indicating the degree of presence of any rival considerations in your case study. However, more work in this direction needs to be done in the future.

*Case-based compared with variable-based approaches.* Dwelling on the holistic feature of the case(s) being studied represents a core feature of case study research. The

goal is to understand "the case"—what it is, how it works, and how it interacts with its real-world contextual environment. Many people still think that a case can be characterized by a set of variables—that is, the micro elements, such as a case's demographic profile, and many people still use a collection of variables to define a case. However, the relevant holism seems to go beyond a mere collection of micro elements.

Nevertheless, variables are still important in case study research. How to keep the holistic essence of case study research while still appreciating the collection of variables represents a second type of unfinished business. Sufficient clarification still awaits. For instance, Charles Ragin's (1987/2014) qualitative comparative analysis (QCA) is a case-based approach that involves defining *patterns* of variables *within* each case—and that then creates case typologies—before making cross-case comparisons. However, QCA is still at a frontier, and other approaches have yet to establish how to maintain a sufficiently holistic orientation in defining a suitable *pattern* of variables or an insightful *typology* at a holistic level.

As noted in Tutorial 1, which is posted on the companion website at study.sagepub.com/yin6e, the reference to variables does not mean that case study research is variable based. On the contrary, the multiplicity of variables (compared with the small number of cases in most case studies) raises doubts about the usefulness of conventional, variable-based methods in analyzing case study data. Still waiting to be developed—and therefore the unfinished business—are methodic and holistic, case-based methods for doing such analyses. Without such methods, Chapter 5 of this book later alerts readers to the potential difficulties created when researchers try to do cross-case syntheses but remain captives of variable-based thinking.

*Relationship between qualitative research and case study research.* The sixth edition gingerly touches upon a third unfinished topic: the relationship between case study research and qualitative research. Chapter 1 briefly contrasts the realist and relativist perspectives, and in the literature, you may encounter occasional reference to the possibility of doing a "qualitative case study." In fact, an earlier tradition, reflected by the treatment of case studies in the first edition of the *Handbook of Qualitative Research* (Denzin & Lincoln, 1994), as well as the inclusion of "case study" as one of the five major types of qualitative research in a well-received textbook on qualitative research (Creswell & Poth, 2017), implicitly tends to assume that doing a case study might be considered one of the acceptable variants in doing qualitative research.

An opposing perspective, however, suggests that case study research may be separate from qualitative research. Case studies may need to follow their own customized research procedures—as in identifying and defining the case to be studied, along with numerous other procedures as discussed in the chapters of this book. In a complementary manner, even a comprehensive presentation of qualitative research

(e.g., Yin, 2016) may not need to include much discussion about case study research—just as a presentation of qualitative research does not need to include much discussion about survey, experimental, historical, or archival research.

The entire issue of whether case study research is automatically to be subsumed under qualitative research or whether and in what way it might be a separate method deserves much further explication. In psychology, case study research seems to appear entirely apart from qualitative research, as briefly discussed in Appendix A at the end of this book. However, in other disciplines and professions, the issue may assume contrasting forms. Likewise, the issue may have received varying treatments over major methodological eras, including the evolution of both case study research and qualitative research since the mid-1950s. To be authoritative, the desired explication will therefore need to embrace a broad literature, having both cross-disciplinary and historical perspectives. For these reasons, the complexity of the issue seems to represent another piece of unfinished business.

## A NEW AND COMPANION WEBSITE

Despite the unfinished business, the sixth edition still represents a comprehensive introduction to case study research. If you want to learn about or do case study research, you will not find any comparable breadth or depth elsewhere. Nevertheless, the continuing advances in case study research methods create an ongoing challenge: how to balance the book's orientation between newcomers to case study research, compared with those already more experienced and accomplished in knowing about case study research.

As currently constituted, the sixth edition veers more toward the former audience. The book hopes to entice, expose, and even enthrall students and scholars who may not have previously done or been exposed to case study research.

To cater to the latter audience, Sage Publications has made a companion website, study.sagepub.com/yin6e, available to post supplementary materials. The website therefore contains the materials that might be more helpful and informative for scholars already advanced in their knowledge of case study research. Hopefully, such an arrangement will permit readers to make their own forays into case study research, and on their own terms. For instance, the fifth edition had contained several *tutorials* that explored some key issues, with authoritative references, in greater depth. This material, along with a lot of other reprints and writings that preceded even the first edition of this book, is now found on the website. The hope is that the website can help anyone who might want to know more but not to interfere with those of you just setting out on your initial journey with case study research.

One place where the sixth edition remains steadfastly consistent with all the earlier editions deserves repeated mention: Donald Campbell's insightful foreword. His

succinct words, written more than 30 years ago, still stand as a masterpiece about social science methods. Within the context of today's research dialogues, Campbell's work continues, remarkably, to speak with freshness and direct relevance. His foreword also positions well the role of case study research as portrayed in this book. I continue to be deeply honored by the inclusion of this foreword and have attempted to return but a modest contribution, now to his memory, in a subsequent publication (Yin, 2000b).

The successful practicing of this edition's techniques and guidance means that case study research will be better than in the past. The ultimate goal, as always, is to improve our social science methods and practices over those of previous cohorts of scholars. Only in this manner can every cohort make its own mark, much less establish its own competitive niche.

As a final note, I conclude this preface by repeating a portion from the preface to the fourth edition. In it, I suggested that anyone's ideas about case study research—and about modes of social science inquiry more generally—must have deeper roots. Mine go back to the two disciplines in which I was trained: history as an undergraduate and brain and cognitive sciences as a graduate. History and historiography first raised my consciousness regarding the importance (and challenge) of methodology in the social sciences. The unique brand of basic research in brain and cognitive science that I learned at MIT then taught me that empirical research advances only when accompanied by theory and logical inquiry, and not when only treated as a mechanistic data collection endeavor. This lesson turns out to be a basic theme in doing case study research. I have therefore dedicated this book to the person at MIT, Prof. Hans-Lukas Teuber, who taught me this best and under whom I completed a dissertation on face recognition, though he might only barely recognize the resemblances between past and present were he alive today.

## Notes

1. The counts are based on the appearance of a given word or term in published books. Unfortunately, *Ngram Viewer* does not indicate the number of books covered during any particular period of time, so the website does not provide the number of books accessed from 1980 to 2008. Overall, *Ngram Viewer* claims that it has amassed about 4% of all books ever published (Michel et al., 2010).
2. I chose not to select a fifth term, "qualitative research," because its usage overlaps in some unknown way with "case study research." The inclusion would have clouded my main intended comparison, which was between "case study research" and the other three types of inquiries.
3. Avid supporters of the gold standard have nevertheless published a research article using "case study" in its title (Cook & Foray, 2007). Readers should not take this as an example of how to do case study

research, however. The article mainly contains the authors' rendition of a set of events at the outset of the decade in question (a set that apparently could not be told with quantitative methods) but does not present much actual evidence to support that rendition. (The rendition may be insightful, but whether it should be accepted as an example of case study research or as a "popular" case study remains an open question.)

4. The Internet source of this tally does not indicate the time period that it covered, but Google *Scholar* started in 2004 and the source for the tally appeared in 2016, so an estimate of 2004 to 2015 as the years that were covered would be one guess.

5. An interesting side note would point to developments in one of the other social science methods—surveys. In contemporary political polls, note that the "margin of error" is now reported in the popular media every time a polling result is cited. Such reporting did not usually occur in the past. One offshoot of the reference to the margin of error is that it readily reminds (and educates) the audience that these data were based on surveys that respectfully followed relevant research procedures. What might be helpful in the (distant) future is for the popular case studies to contain an analogous reminder, if the case study indeed used any research procedures, such as triangulating data from two or more sources of evidence.

# ACKNOWLEDGMENTS

The publication of this sixth edition marks the 34th year since the book's original publication. During this time, many people have influenced my thinking—by asking questions, making suggestions, or just maintaining a healthy skepticism toward case study research. I am extremely grateful for all this interest and support. Unfortunately, the cumulative list of pertinent colleagues has become a bit lengthy. Especially because the five earlier editions have acknowledged many of them, I would therefore like to attend to a more recent set of colleagues, who knowingly or unknowingly had some influence on the words and concepts that appear in this sixth edition.

A prolonged set of interactions with the staff at The World Bank included working with two different groups. The first group focused on the development of a series of "service delivery case studies." Christos Kostopoulos and his staff challenged us all to think about the boundaries of the cases as well as some intriguing design and data collection procedures. I am grateful for having been part of his team, which also consisted of Vera A. Wilhelm, Sameh El-Saharty, Erica Wu, and Jeanette Murry, as well as Oliver Haas, who served as a bridge to a later phase of the work. The second group focused on various "country case studies" that were conducted in association with several different evaluation projects. The World Bank's evaluation staff with whom I interacted included Caroline Heider (the head of the evaluation group), Mark Sundberg, Susan Ann Cáceres, Erik A. Bloom, Pia Helene Schneider, Xubei Luo, Ann Elizabeth Flanagan, Guiseppe Iarossi, Anthony Martin Tyrrell, and Viktoriya Yevsyeyeva. Across four separate projects, Susan Ann Cáceres posed especially challenging issues that tested my own thoughts. I would like to thank all these persons at The World Bank for their having raised many questions about doing case studies—especially in contrast to their conventional economic methods.

In a different field, faculty and students in the Division of Special Education and disAbility Research at George Mason University have been collecting in-depth information about individual students as separate cases. Led by Prof. Sheri Berkeley and PhD students Anna Menditto and Amanda Luh, the team has confronted the question of how to analyze the data from the students, when only a small number have been studied. I have benefited enormously from joining in this venture and thank the team for sharing it with me. Also in a university setting, students enrolled in the

School of Education's methodology course at Southern New Hampshire University, led by Prof. Nancy Charron and Mary Kim Lindley-Soucy, have broadened my view of case study research by posing questions over Skype Q&A sessions. Different groups of students have participated in these sessions, which have been held annually for several years. Serendipitously, the students' questions often produce nuggets of wisdom, and I thank the students for these nuggets and Nancy and Kim for initiating the entire arrangement.

In yet another field, a research team led by Katherine Patterson Kelly (PhD, RN, Nurse Scientist) at the Department of Nursing Research and Quality Outcomes, Children's National Health System, has been studying therapy groups in a series of case studies. Collecting and analyzing data from each group as a whole (as well as from the group's members individually) has led Kelly and her team into an innovative realm. I again have been fortunate to participate in this work and thank Kelly and Pamela S. Hinds (PhD, RN, FAAN, and Professor of Pediatrics, The George Washington University), the director of the department, for sharing this research experience.

As part of the preparation of this sixth edition, Sage Publications invited reviewers to reflect upon their experiences in using the fifth edition. I thank them for their extensive and helpful comments, and I hope that they will see the adoption of at least some of their suggestions:

Michael A. Guerra, Lincoln University

Landon E. Hancock, Kent State University

Ellen S. Hoffman, University of Hawai'i at Mānoa

Barbara J. Holtzclaw, The University of Oklahoma Health Sciences Center, Fran and Earl Ziegler College of Nursing

Claretha Hughes, University of Arkansas

Kriss Y. Kemp-Graham, Texas A&M University–Commerce

Joseph McNabb, Professor of the Practice

Eva Mika, Northcentral University

David M. Sprick, Park University

Bruce E. Winston, Regent University, School of Business & Leadership

Asta Zelenkauskaite, Drexel University

Finally, the editors at Sage played an important role in reshaping this sixth edition so that it would include the applications. Vicki Knight started the process before retiring from Sage, and Leah Fargotstein carried the project forward thereafter. To them I owe a debt of gratitude as well as to several others at Sage who contributed to the production and sharpening process—Kelly DeRosa, Gillian Dickens, and Yvonne McDuffee. Nonetheless, as with the earlier versions of this book, I alone bear the responsibility for this sixth edition.

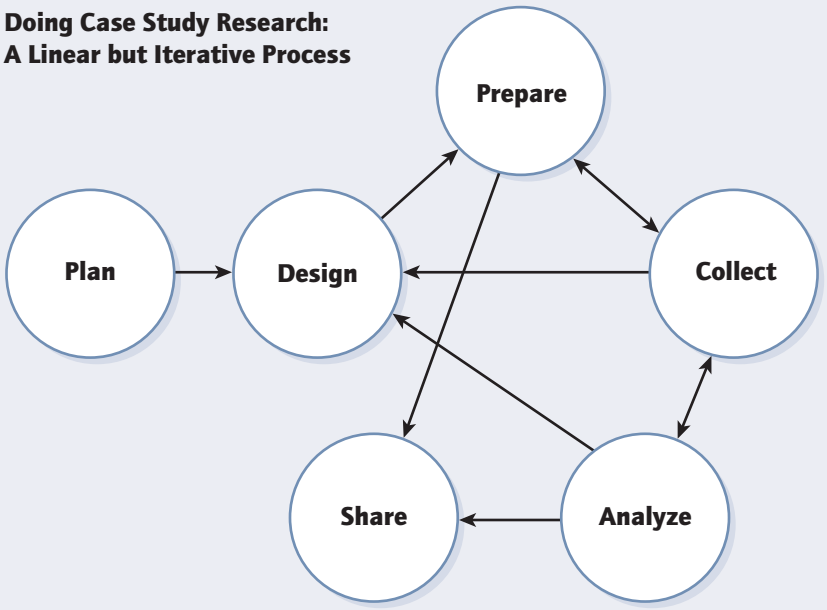
# ABOUT THE AUTHOR

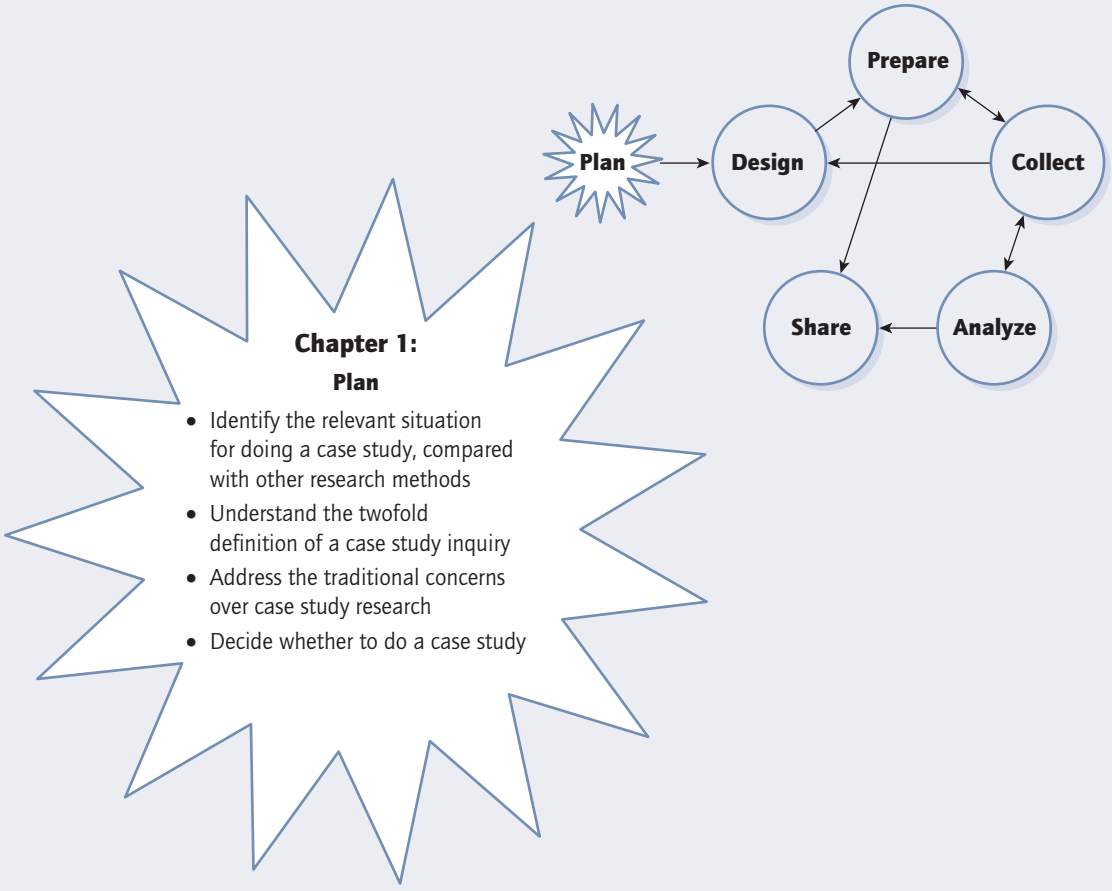
**Robert K. Yin** is President of COSMOS Corporation, an applied research and social science firm. Over the years, COSMOS has successfully completed hundreds of projects for federal agencies, state and local agencies, and private foundations.

Outside of COSMOS, Dr. Yin has assisted numerous other research groups, helping to train their field teams or to design research studies. The most recent such engagements have been with The World Bank, the Division of Special Education and disAbility Research at George Mason University, the Department of Nursing Research and Quality Outcomes at the Children's National Health System (Washington, D.C.), and the School of Education, Southern New Hampshire University.

Dr. Yin has authored more than 100 publications, including authoring or editing 11 books (not counting the multiple editions of any given book). Earlier editions of the present book have been translated into eight languages (Chinese, Japanese, Korean, Swedish, Romanian, Italian, Polish, and Portuguese), and a second book on *Qualitative Research From Start to Finish* (2016) is in its second edition and has been translated into four languages (Chinese, Korean, Swedish, and Portuguese). Dr. Yin received his BA in history from Harvard College (magna cum laude) and his PhD in brain and cognitive sciences from MIT.

**Doing Case Study Research:**
**A Linear but Iterative Process**






## ABSTRACT

You want to study something relevant but also exciting—and you want to use an acceptable if not esteemed social science method. Doing a "case study" strikes your fancy, but how you might do a good one remains a challenge, compared with doing an experiment, survey, history, or archival analysis (as in economic or statistical modeling). You are intrigued and want to learn more about doing a case study.

This chapter suggests that you might favor choosing case study research, compared with the others, when (1) your main research questions are "how" or "why" questions, (2) you have little or no control over behavioral events, and (3) your focus of study is a contemporary (as opposed to entirely historical) phenomenon—a "case." The chapter then offers a common definition to be applied to the ensuing case study. Among the variations in case studies, yours can include single or multiple cases, can even be limited to quantitative evidence if desired, and can be part of a mixed-methods study.

Properly doing a case study means addressing five traditional concerns—conducting the research rigorously, avoiding confusion with *non*research case studies (i.e., popular case studies, teaching-practice case studies, and case records), arriving at generalized conclusions if desired, carefully managing your level of effort, and understanding the comparative advantage of case study research. The overall challenge makes case study research "hard," although it has classically been considered a "soft" form of research.

# 1

# GETTING STARTED

## How to Know Whether and When to Use the Case Study as a Research Method

## BEING READY FOR THE CHALLENGE, AND SETTING HIGH EXPECTATIONS

Doing case study research remains one of the most challenging of all social science endeavors. This book will help you—whether an experienced or emerging social scientist—to deal with the challenge. Your goal is to design good case studies and to collect, present, and analyze data fairly. A further goal is to bring your case study to closure by composing a compelling article, report, book, or oral presentation.

Do not underestimate the extent of the challenge. Although you may be ready to design and do case study research, others may espouse and advocate other modes of social science inquiry. Similarly, prevailing federal or other research funds may favor methods other than case studies. As a result, you may need to have ready responses to some inevitable questions and set high expectations for yourself.

*Following a clear methodological path.* First and foremost, you should explain how you are devoting yourself to following a clear methodological path. For instance, a conventional starting place would be to review literature and define your case study's research questions. Alternatively, however, you might want to start with some fieldwork first, prior to defining any theoretical concerns or even examining the relevant research literature. In this latter mode, you might be entertaining a contrary perspective: that

### *Tip:* How do I know if I should be doing case study research?

There's no formula, but your choice depends in large part on your research question(s). The more that your questions seek to *explain* some contemporary circumstance (e.g., "how" or "why" some social phenomenon works), the more that case study research will be relevant. Case studies also are relevant the more that your questions require an extensive and "in-depth" description of some social phenomenon.

**What are some other reasons you might cite for doing or not doing case study research?**

what might be "relevant," as well as the pertinent research questions, may not be determinable ahead of knowing something about what's going on in the field. Regardless of your starting place, the path should explicitly show how you will adhere to formal and explicit procedures when doing your research.

Along these lines, this book offers much guidance. It shows how case study research is distinctive but also covers procedures central to all modes of social science research. In shaping your case study, you might like to know whether to design and conduct a single- or a multiple-case study to investigate a research issue. You may only be doing a case study or you may be using it as part of a larger mixed-methods study. Whatever the choices, this book covers the entire range of issues in designing and doing case study research, including how to start and design a case study, collect case study evidence, analyze case study data, and compose a case study report.

Equally important, the book will help you deal with some of the more difficult questions still frequently neglected by available research texts. So often, for instance, the author has been confronted by a student or colleague who has asked (a) how to define the "case" being studied, (b) how to determine the relevant data to be collected, or (c) what to do with the data, once collected. This book addresses these and many other questions. The successful experiences of scholars and students from using this book, for more than 30 years, may attest to the potential payoffs.

*Acknowledging strengths and limitations.* Second, you should understand and openly acknowledge the strengths and limitations of case study research. Such research, like any other, complements the strengths and limitations of other types of research.

Just as different types of research inquiries prevail in the physical and life sciences, different inquiries serve different needs when investigating social science topics. Note that the sciences do not follow a single method, such as the experimental method. Astronomy is a science but does not rely on the experimental method; nor do engineering and geology

(Scriven, 2015). Similarly, many studies in neurophysiology and neuroanatomy do not rely on statistical methods. A diverse array of methods also marks the social sciences, and the next section of this chapter will contrast these methods to help you understand the methodological choices and differences.

*Setting high expectations in your chosen field.* Case study research is commonly found in many social science disciplines as well as the practicing professions (e.g., psychology, sociology, political science, anthropology, social work, business, education, nursing, and community planning). As one result, your high expectations not only should follow a clear methodological path, as just discussed, but also can cater to your own field.

Figure 1.1 lists 15 such fields, along with illustrative texts that focus on the use of case study research in each specific field. (Not cited are either of two other kinds of works: general methodological texts that discuss various types of research methods, even if including case study research, and general texts on case study research that are not directed at any specific field.) Checking the work(s) in your chosen field may point to some subtle ways of customizing your case study in relation to that field. For instance, Appendix A describes the case study's lengthy but peculiar history in one of the disciplines—psychology.

Whatever your field of interest, the distinctive need for case studies arises out of the desire to understand complex social phenomena. Case studies allow you to focus in-depth on a "case" and to retain a holistic and real-world perspective—such as in studying individual life cycles, small group behavior, organizational and managerial processes, neighborhood change, school performance, international relations, and the maturation of industries.

## COMPARING CASE STUDIES WITH OTHER SOCIAL SCIENCE RESEARCH METHODS

When and why would you want to use a case study to examine some social science topic? Should you consider doing an experiment instead? A survey? A history? An analysis of archival records, such as the statistical modeling of epidemiological trends or of student performance in schools?

These and other choices represent different research methods. Each is a different way of collecting and analyzing empirical evidence. Each follows its own logic and procedures. And each method has its own advantages and disadvantages. To get the most out of doing case study research, you may need to appreciate these distinctions.

**FIGURE 1.1 ● Sampler of Works Devoted to Case Study Research in Specific Fields**

| Field | Illustrative Work(s) |
|---|---|
| ACADEMIC DISCIPLINES: | |
| **Anthropology and Ethnography** | Burawoy, 1991 |
| **Political Science** | George & Bennett, 2005; Gerring, 2004 |
| **Psycholinguistics** | Duff, 2008 |
| **Psychology** | Bromley, 1986; Campbell, 1975; McLeod, 2010 |
| **Sociology** | Feagin, Orum, & Sjoberg, 1991; Hamel, 1992; Mitchell, 1983; Platt, 1992 |
| PRACTICING PROFESSIONS: | |
| **Accounting** | Bruns, 1989 |
| **Business and International Business** | Dul & Hak, 2008; Farquhar, 2012; Gibbert, Ruigrok, & Wicki, 2008; Johnston, Leach, & Liu, 2000; Meyer, 2001; Piekkari, Welch, & Paavilainen, 2009; Vissak, 2010 |
| **Education** | Hamilton & Corbett-Whittier, 2013; Yin, 2006a |
| **Evaluation** | U.S. Government Accountability Office, 1990 |
| **Health Care** | Carolan, Forbat, & Smith, 2015; Walshe, 2011 |
| **Marketing** | Beverland & Lindgreen, 2010 |
| **Nursing** | Baxter & Jack, 2008; De Chesnay, 2017 |
| **Public Administration** | Agranoff & Radin, 1991 |
| **Social Work** | Gilgun, 1994; Lee, Mishna, & Brennenstuhl, 2010 |
| **Software Engineering** | Runeson, Höst, Rainer, & Regnell, 2012 |

## Relationships Among the Methods: Not Hierarchical

A common misconception is that the various research methods should be arrayed hierarchically. Many social scientists still implicitly believe that case studies are only appropriate for the exploratory phase of an investigation, that surveys and histories are appropriate for the descriptive phase, and that experiments are the only way of pursuing explanatory or causal inquiries. The hierarchical view reinforces the idea

that case study research is only a preliminary mode of inquiry and cannot be used to describe phenomena or test propositions.

However, you need not automatically accept this hierarchical view. You would point to the fact that experiments with an exploratory motive have certainly always existed. In addition, the development of causal explanations has long been a serious concern of historians, especially reflected by the subfield known as historiography.

Likewise, you also would point out that case studies are far from being only an exploratory method. Some of the best and most famous case studies have been explanatory case studies (e.g., see BOX 1 for a vignette on Allison and Zelikow's *Essence of Decision: Explaining the Cuban Missile Crisis,* 1999; additional examples of explanatory case studies are found in **Applications 8 and 9** in Chapter 5 of this book). Similarly, famous descriptive case studies are found in major disciplines such as sociology and political science (e.g., see BOX 2 for two vignettes; additional examples of descriptive case studies are found in many of the other BOXES in this book). Thus, distinguishing among the various social science methods and their advantages and disadvantages may require going beyond the hierarchical stereotype.

## BOX 1

### A BEST-SELLING, EXPLANATORY, SINGLE-CASE STUDY

For more than 40 years, Graham Allison's (1971) original study of a single case, the 1962 Cuban missile crisis, has been a political science best seller. In this crisis, a U.S.–Soviet Union confrontation could have produced nuclear holocaust and doomed the entire world. The book posits three competing but also complementary theories to explain the crisis—that the United States and Soviets performed as (a) rational actors, (b) complex bureaucracies, or (c) politically motivated groups of persons. Allison compares the ability of each theory to explain the actual course of events in the crisis: why the Soviet Union placed offensive (and not merely defensive) missiles in Cuba in the first place, why the United States responded to the missile deployment with a blockade (and not an air strike or invasion—the missiles already were in Cuba!), and why the Soviet Union eventually withdrew the missiles.

The case study shows the explanatory and not just descriptive or exploratory functions of single-case studies. Furthermore, the authors contrast the lessons from the case study with prevailing alternative explanations in post–Cold War studies of foreign policy and international politics. In this way, the book, even more thoughtfully presented in its second edition (Allison & Zelikow, 1999), forcefully demonstrates how a single-case study can be the basis for insightful generalizations.

## BOX 2

### TWO FAMOUS DESCRIPTIVE CASE STUDIES

#### 2A. A Neighborhood Scene

*Street Corner Society* (1943/1993), by William F. Whyte, has for decades been recommended reading in community sociology. The book is a classic example of a descriptive case study. It traces the sequence of interpersonal events over time, describes a subculture that had rarely been the topic of previous study, and discovers key phenomena—such as the career advancement of lower income youths and their ability (or inability) to break neighborhood ties.

The study has been highly regarded despite its taking place in a small urban neighborhood (under the pseudonym of "Cornerville") and during a time period now nearly 100 years ago. The value of the book is, paradoxically, its generalizability even to contemporary issues of individual performance, group structure, and the social structure of neighborhoods. Later investigators have repeatedly found remnants of Cornerville in their work, even though they have studied different neighborhoods and different time periods (also see BOX 21, Chapter 4).

#### 2B. A National Crisis

Neustadt and Fineberg's excellent analysis of a mass immunization campaign was issued originally as a government report in 1978, *The Swine Flu Affair: Decision-Making on a Slippery Disease,* and later published independently as *The Epidemic That Never Was* (1983). The case study describes the immunization of 40 million Americans that took place under President Gerald Ford's administration, when the United States was faced with a threat of epidemic proportions from a new and potentially lethal influenza strain. Because the case study has become known as an exceptionally well-researched case study, contemporary policy makers have continued to consult it for any generalizable lessons for understanding the quandaries of health crises and public actions in light of new threats by flu epidemics, such as the H1N1 strain of 2008–2010 and by viruses such as the Ebola and Zika outbreaks of 2013 to the present.

The more appropriate view may be an inclusive and pluralistic one: Every research method can be used for all three purposes—exploratory, descriptive, and explanatory studies. There may be exploratory case studies, descriptive case studies, or explanatory case studies. Similarly, there may be exploratory experiments, descriptive experiments, and explanatory experiments.

What distinguishes the different methods is not a hierarchy but the three important conditions discussed next. As an important caution, however, the clarification does not imply that the boundaries between the modes—or the occasions when each is to be used—are always sharp. Even though each mode of inquiry has its distinct characteristics, there are large overlaps among them. The goal is to avoid gross misfits—that is, when you are planning to use one mode of inquiry but another is really more advantageous.

## EXERCISE 1.1 DEFINING DIFFERENT TYPES OF RESEARCH CASE STUDIES

Define the three types of case studies used for research purposes: (a) explanatory case studies, (b) descriptive case studies, and (c) exploratory case studies. Compare the situations in which these different types of case studies would be most applicable. Now name a case study that you would like to conduct. Would it be explanatory, descriptive, or exploratory? Why?

## When to Use the Different Methods

The three conditions consist of (a) the form of research question posed, (b) the control a researcher has over actual behavioral events, and (c) the degree of focus on contemporary as opposed to entirely historical events. Figure 1.2 displays these three conditions and shows how each is related to five social science research methods: experiments, surveys, archival analyses (e.g., economic modeling, or a statistical analysis in an epidemiological study), histories, and case studies. The importance of each condition, in distinguishing among the five methods, is as follows.

**FIGURE 1.2 ● Relevant Situations for Different Research Methods**

| Method | (a) Form of Research Question | (b) Requires Control Over Behavioral Events? | (c) Focuses on Contemporary Events? |
|---|---|---|---|
| Experiment | how, why? | yes | yes |
| Survey | who, what, where, how many, how much? | no | yes |
| Archival Analysis | who, what, where, how many, how much? | no | yes/no |
| History | how, why? | no | no |
| Case Study | how, why? | no | yes |

*Source:* COSMOS Corporation.

*(a) Form of research question (see Figure 1.2, column a).* The first condition covers your research question(s) (Hedrick, Bickman, & Rog, 1993). A basic categorization scheme for the form of questions is this familiar series: "who," "what," "where," "how," and "why" questions.

If research questions focus mainly on "what" questions, either of two possibilities arises. First, some types of "what" questions are exploratory, such as "What can be learned from a study of a startup business?" This type of question is a justifiable rationale for conducting an exploratory study, the goal being to develop pertinent hypotheses and propositions for further inquiry. However, as an exploratory study, any of the five research methods can be used—for example, an exploratory survey (testing, for instance, the ability to survey startups in the first place), an exploratory experiment (testing, for instance, the potential benefits of different kinds of business incentives to determine which type of incentive might be worthy of a more definitive experiment), or an exploratory case study (testing, for instance, the differences between "first-time" startups and startups by entrepreneurs who had previously started other firms, as a prelude to selecting the case(s) for a subsequent case study).

The second type of "what" question is actually a form of a "how many," "how much," or "to what extent" line of inquiry—for example, "What have been the ways that communities have assimilated new immigrants?" Identifying such ways is more likely to favor survey or archival methods than others. For example, a survey can be readily designed to enumerate the "what," whereas a case study would not be an advantageous method in this situation.

Similarly, like this second type of "what" question, "who" and "where" questions (or again their derivatives—"how many," "how much," and "to what extent") are likely to favor survey methods or the analysis of archival data, as in economic studies. These methods are advantageous when the research goal is to describe the incidence or prevalence of a phenomenon or when it is to track certain outcomes. The investigation of prevailing political preferences (in which a survey or a poll might be the favored method) or of the spread of a disease like Ebola or Zika (in which an epidemiologic analysis of health statistics might be the favored method) would be typical examples.

In contrast, "how" and "why" questions are more explanatory and likely to lead to the use of a case study, history, or experiment as the preferred research method. This is because such questions deal with the tracing of operational processes over time, rather than mere frequencies or incidence. Thus, if you wanted to know how a community successfully avoided the potentially catastrophic impact of the closing of its largest employer—a military base (see Bradshaw, 1999, also presented in **Application 8**, Chapter 5 of this book)—you would be less likely to rely on a survey or an examination of archival records and might be better off doing a history or a case study. Similarly, if you wanted to know how research investigators may possibly (but unknowingly) bias their research, you could design and conduct a series of experiments (see Rosenthal, 1966).

Let us take two more examples. If you were studying "who" had suffered as a result of terrorist acts and "how much" damage had been done, you might survey residents, examine government records (an archival analysis), or conduct a "windshield survey" of the affected area. In contrast, if you wanted to know "why" the act had occurred, you would have to draw upon a wider array of documentary information, in addition to

conducting interviews, and you would likely be doing a case study. Moreover, if you focused on the "why" question in more than one terrorist act, you would probably be doing a multiple-case study.

Similarly, if you wanted to know "what" the outcomes associated with a new governmental program had been, you could answer this question by doing a survey or by examining economic data, depending on the type of program involved. Questions—such as "How many clients did the program serve?" "What kinds of benefits were received?" "How often were different benefits produced?"—all could be answered without doing a case study. But if you needed to know "how" or "why" the program had worked (or not), you would lean toward a case study or a field experiment.

To summarize, the first and most important condition for differentiating among the five social science research methods is to classify the form of the research question being asked. In general, "what" questions may be either exploratory (in which case, any of the methods could be used) or about prevalence (in which surveys or the analysis of archival records would be favored). "How" and "why" questions are likely to favor using a case study, experiment, or history.

## EXERCISE 1.2 DEFINING A CASE STUDY RESEARCH QUESTION

Develop a "how" or "why" question that would be the rationale for a case study that you might conduct. Instead of doing a case study, now imagine that you only could do a history, a survey, or an experiment (but not a case study) to address this question. What would be the distinctive advantage of doing a case study, compared with these other methods, in order to address the question?

Defining your research question(s) is probably the most important step to be taken in a research study, so you should be patient and allow sufficient time for this task. The key is to understand that your research questions have both *substance*—for example, What is my study about?—and *form*—for example, am I asking a "who," "what," "where," "how," or "why" question?

Other scholars have focused on some of the substantively important issues (see Campbell, Daft, & Hulin, 1982). The point of the preceding discussion is that the *form* of the question can provide an important clue regarding the appropriate research method to be used. Remember, too, that the methods can overlap. Thus, for some questions, a choice among methods might actually exist. Be aware, finally, that you (or your academic department) may be predisposed to favor a particular method regardless of the study question. If so, be sure to create the form of the study question best matching the method you were predisposed to favor in the first place.

## EXERCISE 1.3 IDENTIFYING THE RESEARCH QUESTIONS WHEN OTHER RESEARCH METHODS ARE USED

Locate a research study based solely on the use of a survey, history, or experiment (but not a case study). Identify the research question(s) addressed by the study. Does the type of question differ from those that might have appeared as part of a case study on the same topic, and if so, how?

*(b) Control over behavioral events (see Figure 1.2, column b)—and focus on contemporary as opposed to entirely historical events (see Figure 1.2, column c).* Assuming that "how" and "why" questions are to be the focus of study, these two remaining conditions help to distinguish further among a history, a research case study, and an experiment.

A history has virtually no such control and deals with the "dead" past—that is, when direct observations of the event(s) being studied are not possible and when no relevant persons are alive to report, even retrospectively, what occurred. The historian must then rely on primary documents, secondary documents, and cultural and physical artifacts as the main sources of evidence. A more contemporary version of historical research can study the recent but not quite "dead" past, as in conducting an *oral history* (e.g., Janesick, 2010). In this situation, historical research begins to overlap with case study research.

Case studies are preferred when the relevant behaviors still cannot be manipulated and when the desire is to study some contemporary event or set of events ("contemporary" meaning a fluid rendition of the recent past and the present, not just the present). The case study relies on many of the same techniques as in a history, but it also relies heavily on two sources of evidence not usually available as part of the conventional historian's repertoire: direct observation of the events being studied and interviews of the persons who may still be involved in those events. Again, although case studies and histories can overlap, the case study's unique strength is its ability to deal with a full variety of evidence—documents, artifacts, interviews, and direct observations, as well as participant-observation (see Chapter 4)—beyond what might be available in a conventional historical study.

Finally, experiments call for an investigator to manipulate behavior directly, precisely, and systematically. This can occur in a laboratory setting, in which an experiment may focus on one or two isolated variables (and presumes that the laboratory environment can "control" for all the remaining variables beyond the scope of interest), or it can be done in a field setting, where the term *field* (or *social*) *experiment* has emerged to cover research where investigators "treat" whole groups of people in different ways, such as providing

(or not providing) them with different kinds of vouchers to purchase services (Boruch & Foley, 2000).

The full range of experimental research also includes those situations in which the experimenter cannot manipulate behavior but in which the logic of experimental design still may be applied. These situations have been commonly regarded as *quasi-experimental research* (e.g., Campbell & Stanley, 1966; Cook & Campbell, 1979) or *observational studies* (e.g., Rosenbaum, 2002, 2009). They differ from case study research because of their adherence to experimental principles and inferences.

*Summary.* You should be able to identify some situations in which all research methods might be relevant (such as doing an exploratory study) and other situations in which two methods might be considered equally attractive. You also can use multiple methods in any given study (e.g., a survey within a case study or a case study within a survey). To this extent, the various methods are not mutually exclusive. But you also should be able to identify some situations in which a specific method has a distinct advantage. For case studies, this niche is when

- a "how" or "why" question is being asked about
  - a contemporary set of events
  - over which a researcher has little or no control.

To determine the questions that are the most pressing on a topic, as well as to gain some precision in formulating these questions, requires much preparation. One way is to review the literature on the topic (Cooper, 1984). Note that such a literature review is therefore a means to an end and not—as many people have been taught to think—an end in itself. Novices may think that the purpose of a literature review is to determine the *answers* about what is known on a topic; in contrast, experienced investigators review previous research to develop sharper and more insightful *questions* about the topic.

## VARIATIONS IN CASE STUDIES, BUT A COMMON DEFINITION

Our discussion has progressed without formally defining *case study.* In addition to a need for a definition, three commonly asked questions about variations in case studies still have to be addressed. For example, (1) Is it still a case study when more than one case is included in the same study? (2) Does a case study preclude the use of quantitative evidence? (3) Can a case study be used to do evaluations? Let us now attempt first to define the case study as a research method and then to address these three questions.

## Definition of the Case Study as a Research Method

Some definitions of case studies have merely repeated the types of topics to which case studies have been applied. For example, in the words of one scholar,

> The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a *decision* or set of decisions: why they were taken, how they were implemented, and with what result. (Schramm, 1971, emphasis added)

This definition thus cites cases of "decisions" as the major focus of case studies. Other common cases can include "individuals," "organizations," "processes," "programs," "neighborhoods," "institutions," and even "events." However, dwelling on the definition of a case study by interest in an individual case, not by the methods of inquiry used (e.g., Stake, 2005, p. 443), would seem insufficient to establish the complete basis for case studies as a *research* method. Outside of social science research, notice that the everyday use of case studies in the popular literature and media (*popular case studies*—see the Preface) further blurs the issue.

In fact, many of the earlier social science textbooks failed to consider case studies as a formal method at all. As discussed previously, one common shortcoming was to consider case studies as the exploratory stage of some other type of research method.

Another definitional shortcoming had been to confuse case studies with doing "fieldwork," as in participant-observation. Thus, early textbooks limited their discussion of case studies to descriptions of participant-observation or of fieldwork as a data collection process, without elaborating further on a definition of case study research (e.g., Kidder & Judd, 1986; Nachmias & Nachmias, 2014).

In a historical overview of the case study in American methodological thought, Jennifer Platt (1992) explains the reasons for these treatments. She traces the practice of doing case studies back to the conduct of life histories, the work of the Chicago school of sociology, and casework in social work. She then shows how *participant-observation* emerged as a data collection technique, effectively eliminating any further recognition of case study research. Thus, she found ample references to case study research in methodological textbooks up to 1950 but hardly any references to case studies or to case study research in textbooks from 1950 to 1980 (Platt, 1992, p. 18). Finally, Platt explains how the first edition of this book (1984) definitively dissociated case study research from the limited perspective of only doing some kind of fieldwork. She then also showed how a renewed discussion of case study research began to emerge in textbooks, largely occurring from 1980 to 1989 and continuing thereafter. Case study research, in her words, had now come to be appreciated as having its own "logic of design . . . a strategy to be preferred when circumstances and research problems are appropriate rather than an ideological commitment to be followed whatever the circumstances" (Platt, 1992, p. 46).

*A twofold definition of case study as a research method.* And just what is this research method? The critical features first appeared in earlier publications (Yin, 1981a, 1981b, and reproduced on the companion website, study.sagepub.com/yin6e), predating the first edition of this book. The resulting definition as it has evolved over the five previous editions of this book reflects a twofold definition. The first part begins with the *scope* of a case study, when doing case study research:

1. A case study is an empirical method that
    - investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when
    - the boundaries between phenomenon and context may not be clearly evident.

In other words, you would want to do a case study because you want to understand a real-world case and assume that such an understanding is likely to involve important contextual conditions pertinent to your case (e.g., Yin & Davis, 2007).

This first part of the definition therefore helps you to continue distinguishing case studies from the other modes of inquiry that have been discussed. Experimental research, for instance, deliberately separates a phenomenon from its context, attending only to the phenomenon of interest (usually as represented by a few variables). Typically, experiments ignore the context by "controlling" it in a laboratory environment. Historical research, by comparison, does deal with the entangled situation between phenomenon and context but usually in studying *non*contemporary events. Finally, survey research can try to deal with phenomenon and context, but a survey's ability to investigate the context is extremely limited. The survey designer, for instance, constantly struggles to limit the number of items in a questionnaire (and hence the number of questions that can be analyzed) to fall safely within the allotted degrees of freedom (usually constrained by the number of respondents who are to be surveyed as well as the presumed variability in the likely response sets).

The second part of the definition of case studies arises because phenomenon and context are not always sharply distinguishable in real-world situations. Therefore, other methodological characteristics become relevant as the *features* of a case study, when doing case study research:

2. A case study
    - copes with the technically distinctive situation in which there will be many more variables of interest than data points,[1] and as one result
    - benefits from the prior development of theoretical propositions to guide design, data collection, and analysis, and as another result
    - relies on multiple sources of evidence, with data needing to converge in a triangulating fashion.

In essence, the twofold definition—covering the scope and features of a case study—shows how case study research comprises an all-encompassing mode of inquiry, with its own logic of design, data collection techniques, and specific approaches to data analysis. In this sense, case studies are not limited to being a data collection tactic alone or even a design feature alone (Stoecker, 1991). How case study research is practiced is the topic of this entire book. See Tutorial 1.1 on the companion website at study.sagepub.com/yin6e for an elaboration of the definition of "case study."

### EXERCISE 1.4 FINDING AND ANALYZING AN EXISTING CASE STUDY FROM THE RESEARCH LITERATURE

Retrieve an example of case study research from the research literature. The case study can be on any topic, but it must have some empirical method and present some empirical (qualitative or quantitative) data. Why is this a research case study? What, if anything, is distinctive about the findings that could not be learned by using some other social science method focusing on the same topic?

*Applicability of different epistemological orientations.* This all-encompassing mode of inquiry also can embrace different epistemological orientations—for example, embracing a *relativist* or *interpretivist* orientation, compared with a *realist* orientation.[2]

Much of case study research as it is described in this book appears to be oriented toward a *realist* perspective, which assumes the existence of a single reality that is independent of any observer. However, case study research also can excel in accommodating a *relativist* perspective (e.g., Boblin, Ireland, Kirkpatrick, & Robertson, 2013; Leppäaho, Plakoyiannaki, & Dimitratos, 2015)—acknowledging multiple realities and having multiple meanings, with findings that are observer dependent.

By pursuing a *relativist* perspective, you might pursue a *constructivist* approach in designing and conducting your case study—attempting to capture the perspectives of different participants and focusing on how their different meanings illuminate your topic of study. Although this book may not offer comprehensive guidance on pursuing a relativist or constructivist approach, many of the book's topics still offer helpful and relevant ideas for doing such case studies. For instance, Chapter 2 will later discuss the importance of "theory" in designing case studies and alert you to the optional choices.

## Variations in Case Studies as a Research Method

Certain other characteristics of case studies are not critical for defining the method. They may be considered variations in case studies, which now also provide the opportunity to address the three questions posed at the outset of this subsection.

Yes, case studies include both single- and multiple-case studies (e.g., Stake, 2006). Although some fields, such as political science and public administration, have tried to distinguish between these two situations (and have used such terms as the *comparative case method* as a distinctive form of multiple-case studies; see Agranoff & Radin, 1991; Dion, 1998; Lijphart, 1975), single- and multiple-case studies are in reality but two variations of case study designs (see Chapter 2 for more). BOX 3 contains two examples of multiple-case studies.

## BOX 3

### MULTIPLE-CASE STUDIES: CASE STUDIES CONTAINING MULTIPLE "CASES"

The same case study can cover multiple cases and then draw a single set of "cross-case" conclusions. The following two examples both focused on a topic of continuing public interest: identifying successful programs to improve U.S. social conditions.

#### 3A. A Cross-Case Analysis Following the Presentation of Separate, Single-Case Studies

Jonathan Crane (1998) edited a book that has nine social programs as separate case studies. Each case study had a different author and was presented in its own chapter. The programs had in common strong evidence of their effectiveness, but they varied widely in their focus—from education to nutrition to drug prevention to preschool programs to drug treatment for delinquent youths. The editor then presented a cross-program analysis in a final chapter, attempting to draw generalizable conclusions that could apply to many other programs.

#### 3B. A Book Whose Entire Text Is Devoted to the Multiple-Case ("Cross-Case") Analysis

Lisbeth Schorr's (1997) book is about major strategies for improving social conditions, illustrated by four policy topics: welfare reform, strengthening the child protection system, education reform, and transforming neighborhoods. The book continually refers to specific cases of successful programs, but these programs do not appear as separate, individual chapters or case studies. Also citing data from the literature, the author develops numerous generalizations based on the cases, including the need for successful programs to be "results oriented." Similarly, she identifies six other attributes of highly effective programs (also see BOX 44A and 44B, Chapter 6).

And yes, case studies can include, and even be limited to, quantitative evidence. In fact, any contrast between quantitative and qualitative evidence does not set apart the various research methods. Note that, as analogous examples, some experiments (such as studies of perceptions) and some survey questions (such as those seeking categorical rather than numerical responses) rely on qualitative and not quantitative evidence. At the opposite end of the spectrum, some historical studies can include enormous amounts of quantitative evidence.

As an important caveat to the preceding paragraph, the relationship between case study research and qualitative research still has not been fully explored. Some have recognized case studies as being among the viable choices in doing qualitative research (e.g., Creswell & Poth, 2017). Nevertheless, and in contrast, the features and core characteristics of case studies—for example, the necessity for defining a "case," the triangulation among multiple sources of evidence, and the ability to rely on quantitative data—seem to push case study research beyond being a type of qualitative research. As a further example, case study research need not always engage in the *thick description* (Geertz, 1973) or detailed observational evidence that marks many forms of qualitative research. And as yet another challenge, qualitative research (almost by definition) may not be limited to quantitative evidence. Not surprisingly, some disciplines such as psychology have tended to allow case study research and qualitative research to stand apart from each other (see Appendix A of this book).

And yes (and as discussed in greater detail in Appendix B of this book), case study research has its own place in doing evaluations (see Cronbach & Associates, 1980; Patton, 2015; Stufflebeam & Shinkfield, 2007, pp. 309–324; U.S. Government Accountability Office, 1990; Yin, 2013). There are at least four different applications (U.S. Government Accountability Office, 1990). The most important is to *explain* the presumed causal links in real-world interventions that are too complex for survey or experimental methods. A second application is to *describe* an intervention and the real-world context in which it occurred. Third, a case study can *illustrate* certain topics within an evaluation, again in a descriptive mode. Fourth, case study research may be used to *enlighten* those situations in which the intervention being evaluated has no clear, single set of outcomes. Whatever the application, one constant theme is that program sponsors—rather than researchers alone—may have a prominent role in defining the evaluation questions and relevant data categories.

## ADDRESSING TRADITIONAL CONCERNS ABOUT CASE STUDY RESEARCH

Although case study research is a distinctive mode of social science inquiry, many researchers nevertheless disdain case studies. As an illustration, case studies have been viewed as a less desirable research method than either an experiment or a survey. Why is this?

*Rigorous enough?* Perhaps the greatest concern has arisen over a presumed need for greater rigor in doing case study research. Too many times, a case study researcher has been sloppy, has not followed systematic procedures, or has allowed equivocal evidence to influence the direction of the findings and conclusions. In doing case study research, you need to avoid such practices.

*Confusion with "nonresearch" case studies.* As discussed in the preface to this book, case studies have played a prominent role *outside of* the research realm. These include case

studies that (a) serve teaching or professional development functions (*"teaching-practice" case studies*), (b) appear in the popular literature and media (*"popular" case studies*), or (c) appear as an integral part of various administrative archives (*"case records"*).

Although all three types of case studies have great value, they nevertheless may be considered *non*research case studies. They do not claim to follow a research method, and they may not be concerned with conventional social science procedures—as in formally describing their methodologies. Thus, in each of the three *non*research situations, the producer of the case study was not necessarily conducting the case study as a research endeavor but was serving some other purpose. The ensuing case study might have been carefully crafted and well written, and it might have led to informative conclusions, but the producer may not have been trying to follow any explicit research method.

For instance, the use of case studies as a teaching tool, originally popularized as "teaching cases" in the fields of law, business, medicine, or public administration (e.g., Ellet, 2007; Garvin, 2003; Llewellyn, 1948; Stein, 1952; Towl, 1969; Windsor & Greanias, 1983) now embraces virtually every professional field and subspecialty, including those in the physical and life sciences.[3] The *teaching-practice case study* may dominate a professional course curriculum (e.g., in business schools or law schools) or may appear as a supplement in a pedagogical setting (e.g., continuing education courses in medicine or other fields). Either way, for teaching purposes, this kind of case study need not contain a complete rendition of all the critically relevant events or perspectives. Rather, the purpose of the teaching-practice case study is to establish a framework for student discussion and debate around some critical professional issue. The criteria for developing good teaching and training case studies—usually of the single- and not multiple-case variety—are therefore different from those for doing case study research (e.g., Caulley & Dowdy, 1987).

The same confusion also may extend to the unknown quality of case studies when they appear in the popular literature or media (*popular case studies*). The presented case study may span an entire magazine article or appear as a brief vignette or video. Under any of these circumstances, the writers still readily refer to their work as a "case study." As one result, many people, including scholars in non–social science fields, may then inappropriately derive their impression of case study research from these popular works that in fact do not claim to have followed any research method.

Finally, case studies may appear as *case records*. Medical records, social work files, and other case records can be used to facilitate some administrative practice, such as a case-based procedure involving child custody evaluation (e.g., Vertue, 2011). Although the creation of a case record or case evaluation may follow a similar procedure as if doing a research case study, in fact the criteria for developing case records differ from those for doing case study research. In particular, Bromley (1986) suggests that the content of case records may be undesirably influenced by "expectations regarding accountability rather than factual data" (p. 69)—also see Appendix A of this book.

You need to be alert to the possibility that some people's only prior exposure to case studies may have been to these three types of *non*research case studies. Such an exposure may taint a person's view of the case study as a research method. For instance, because the teaching-practice case studies exist in great number and are used nowadays so routinely in professional training (preservice and inservice), the experience can have a disparaging effect on one's impressions of case studies as a research method.

When doing a *research* case study, you need to overcome this confusion by highlighting your methodic procedures, especially the reporting of all evidence fairly. You also need to be transparent and explicit about limiting or eliminating any biases, similar to efforts in the other modes of social science inquiry, such as in avoiding the "experimenter effect" (see Rosenthal, 1966), in designing unbiased survey questions (Sudman & Bradburn, 1982), or in searching for evidence when doing historical research (Gottschalk, 1968). The challenges are not different, but in case study research, they may occur more frequently and demand greater attention. In essence, your procedures and documentation need to distinguish your research case study from the other kinds of *non*research case studies.

## EXERCISE 1.5 EXAMINING TEACHING-PRACTICE CASE STUDIES

Obtain a copy of a case study designed for teaching purposes (e.g., a case study in a textbook used in a business school course). Identify the specific ways in which this type of "teaching case" is different from research case studies. Does the teaching case fully cite its primary sources, contain all the relevant evidence, or display data so you can arrive at your own interpretation of the conclusions? Does the teaching case discuss how the evidence resulted in substantive findings and conclusions and compare them with rival interpretations? What appears to be the main objective of the teaching case?

*Generalizing from case studies?* A third common concern about case study research is an apparent inability to generalize from case studies. "How can you generalize from a single-case study?" is a frequently heard question. The answer is not simple.

However, consider for the moment that the same question had been asked about an experiment: "How can you generalize from a single experiment?" In fact, generalizations in the physical and life sciences are rarely based on single experiments. They are usually based on a multiple set of experiments that have replicated the same phenomenon under different conditions. Even then, the generalizations from experimental research can vacillate enormously over time (think of the many reversals regarding the presumed nutritional consequences from consuming caffeine or other foods).

The same approach can be used with case studies, as discussed in detail in Chapter 2. The short answer is that case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. In this sense, neither the "case" nor the

case study, like the experiment, represent "samples." Rather, in doing case study research, your goal will be to expand and generalize theories (analytic generalizations) and not to extrapolate probabilities (statistical generalizations). Or, as three notable social scientists describe in their *single*-case study done years ago, the goal is to do a "generalizing" and not a "particularizing" analysis (Lipset, Trow, & Coleman, 1956, pp. 419–420).[4]

*Unmanageable level of effort?* A fourth frequent concern about case study research is that case studies can potentially take too long and result in massive, unreadable documents. This concern may be appropriate, given the way case studies have been done in the past (e.g., Feagin et al., 1991), but this is not necessarily the way case studies must be done in the future. Chapter 6 discusses alternative ways of composing a case study (whether presenting the case study in writing or orally)—including an option in which the traditional, flowing (and potentially lengthy) narrative even can be avoided, if desired.

Nor need case studies take a long time. This incorrectly confuses case study research with a specific method of data collection, such as ethnography (e.g., O'Reilly, 2012) or participant-observation (e.g., DeWalt & DeWalt, 2011). Ethnographies usually require long periods in the field and emphasize detailed observational and interview evidence. Participant-observation may similarly assume a hefty investment of field effort. In contrast, case study research is a form of inquiry that does *not* depend solely on ethnographic or participant-observer data.

*Comparative advantage?* A fifth possible concern with case study research has to do with its unclear comparative advantage, in contrast to other research methods. This issue especially emerged during the first decade of the 21st century, which favored randomized controlled trials (RCTs) or "true experiments," especially in education and related topics. These kinds of experiments were esteemed because they aimed to establish the effectiveness of various treatments or interventions (e.g., Jadad & Enkin, 2007). In the eyes of many, the emphasis led to a downgrading of case study research because case studies (and other types of nonexperimental methods) cannot directly address the effectiveness issue.

Overlooked has been the possibility that case studies can nevertheless offer important insights not provided by RCTs. Noted quantitative scholars suggest, for instance, that RCTs, though addressing the effectiveness question, are limited in their ability to explain "how" or "why" a given treatment or intervention necessarily worked (or not), and that case studies can investigate such issues (e.g., Shavelson & Towne, 2002, pp. 99–106)—or, as succinctly captured by the subtitle of an excellent article on evaluating public programs, "not whether programs work, but how they work" (Rogers, 2000).[5] In this sense, case study research does indeed offer its own advantage. At a minimum, case studies may be valued "as adjuncts to experiments rather than as alternatives to them" (Cook & Payne, 2002). In clinical psychology, a "large series of single case studies," confirming

predicted behavioral changes after the initiation of treatment, may augment the evidence of efficaciousness from a field trial (e.g., Veerman & van Yperen, 2007). Finally, in a similar manner, case study research can readily complement the use of other quantitative and statistical methods (see BOX 4).

## BOX 4

### COMPLEMENTARITY OF CASE STUDY AND STATISTICAL RESEARCH

In the field of international politics, a major proposition has been that "democracies seldom if ever make war upon one another" (George & Bennett, 2005, p. 37). The proposition has been the subject of an extensive body of research, involving statistical research as well as case study research. An excellent chapter by George and Bennett (2005, pp. 37–58) shows how statistical studies may have tested the correlation between regime types and war, but how case studies have been needed to examine the underlying processes that might explain such a correlation. For instance, one of the more prominent explanations has been that democracies are able to make formal commitments with each other that make the use of military force unnecessary for resolving disputes (p. 57). The review shows how the relevant research has taken place over many decades, involving many different scholars. The entire body of research, based on both the statistical and case studies, illustrates the complementarity of these methods.

*Summary.* Despite the fact that these five common concerns can be allayed, as above, one major lesson is that good case study research is still difficult to do. The inability to screen for a researcher's ability to do a good case study further compounds the problem. People know when they cannot play music; they also know when they cannot do mathematics beyond a certain level, and they can be tested for other skills, such as the bar examination in law. Somehow, the skills for doing good case study research have not yet been formally defined. As a result, "most people feel that they can prepare a case study, and nearly all of us believe we can understand one. Because neither view is well founded, the case study receives a good deal of approbation it does not deserve" (Hoaglin, Light, McPeek, Mosteller, & Stoto, 1982, p. 134). This quotation is from a book by five prominent *statisticians*. Surprisingly, from another field, even they recognize the challenge of doing a good case study.

## Summary

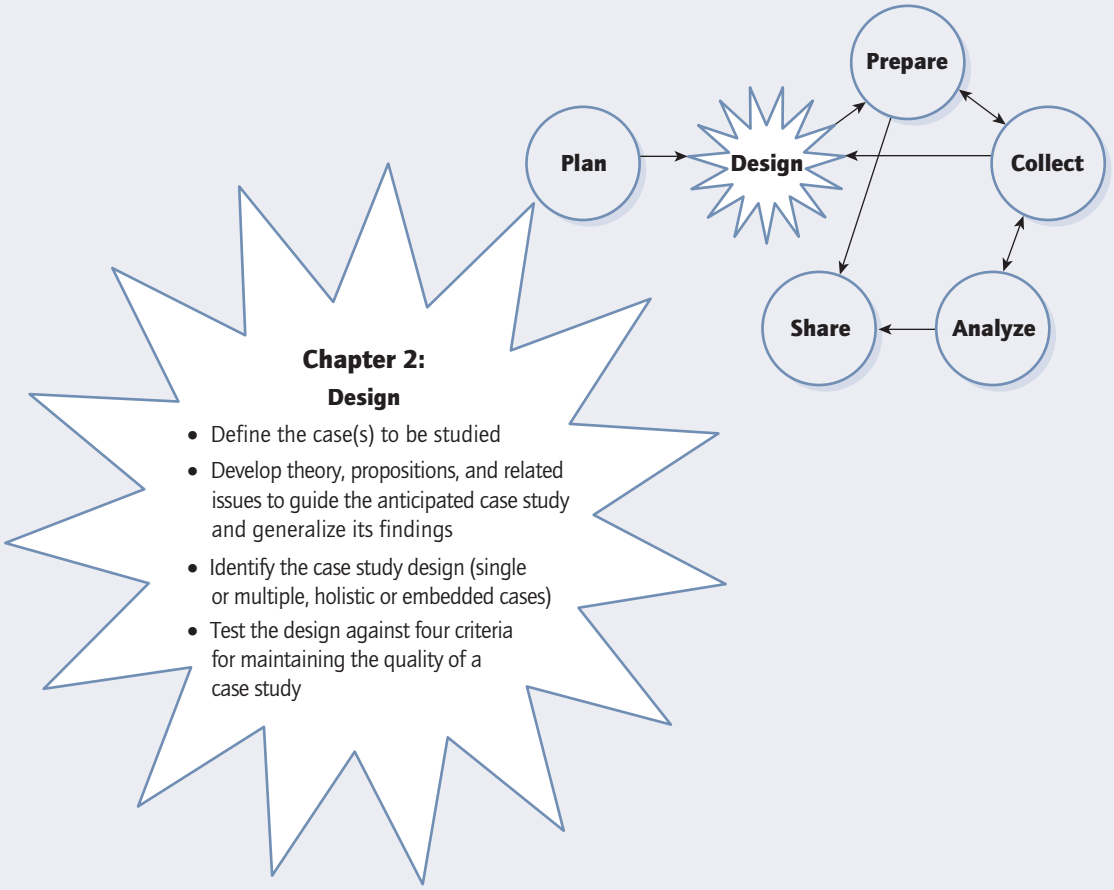
This chapter has introduced the relevance and importance of case study research. Like other social science research methods, case studies investigate an empirical topic by following a set of desired procedures. Articulating these procedures dominates the remainder of this book.

The chapter has provided an operational definition of case studies and has identified some of the known variations. The chapter also has distinguished the case study from other social science methods, suggesting the situations in which doing a case study may be preferred, for instance, to doing a survey. Some situations may have no clearly preferred method, as the strengths and weaknesses of the various methods may overlap. The basic goal, however, is to consider all the methods in an inclusive and pluralistic fashion—before settling on your method of choice in conducting a new social science study.

Finally, the chapter has addressed some of the major concerns about case study research, offering possible responses to these concerns. However, we must all work hard to overcome the problems of doing case study research, including the recognition that some of us were not meant, by skill or disposition, to do such research in the first place. Case study research is remarkably hard, even though case studies have traditionally been considered to be "soft" research, possibly because researchers have not followed systematic procedures. By offering an array of such procedures, this book tries to make case study research easier to follow and your own case study better.

## Notes to Chapter 1

1. Appendix A has a full discussion of the reasons for the large number of variables in a case study.
2. These terms were deliberately chosen even though they oversimplify two contrasting perspectives. Ignored are the many more subtle orientations that investigators may bring to their research. For brief definitions, see Schwandt's (2015a) dictionary of qualitative inquiry, which characterizes *realism* as "the doctrine that there are real objects that exist independently of our knowledge of their existence," *relativism* as "the doctrine that denies that there are universal truths," and *interpretivism* as a term that has occasionally been used as a synonym for all qualitative inquiry. For a fuller discussion of the worldviews more generally, see Creswell (2014).
3. For instance, see the case studies made available by the National Center for Case Study Teaching in Science, at the University of Buffalo, SUNY, a resource supported by the National Science Foundation.
4. There nevertheless may be exceptional circumstances when a single-case study is so unique or important that a case study investigator has no desire to generalize to any other case studies. See Stake's (2005) "intrinsic" case studies, Lawrence-Lightfoot and Davis's (1997) "portraits," and Abma and Stake's (2014) "naturalistic" case studies.
5. Scholars also point out that the classic experiments only can test simple causal relationships—that is, when a single treatment such as a new drug is hypothesized to produce an effect. However, for many social and behavioral topics, the relevant causes may be complex and involve multiple interactions, and investigating these may well be beyond the capability of any single experiment (George & Bennett, 2005, p. 12).




## ABSTRACT

A research design links the data to be collected (and the conclusions to be drawn) to the initial questions of study. Every empirical study has an implicit, if not explicit, research design. You can strengthen case study designs by articulating a "theory" about what is to be learned. The theoretical propositions also lay the groundwork for making *analytic* rather than *statistical generalizations* from your case study.

Critical to the design will be to define the "case" to be studied and to set some limits or bounds to the case. You can then examine the quality of your emerging design in relation to four tests commonly used in social science research: (a) construct validity, (b) internal validity, (c) external validity, and (d) reliability.

Among the specific case study designs, four major types follow a 2 × 2 matrix. The first pair consists of single-case study and multiple-case study designs. The second pair, occurring in combination with either of the first pair, distinguishes between holistic and embedded designs. Whether holistic or embedded, single-case studies can be invaluable when the single-case has any of five characteristics—being a critical, extreme or unusual, common, revelatory, or longitudinal case. Again whether holistic or embedded, the selection of the cases in a multiple-case study should follow a replication rather than sampling logic. Although single-case studies can yield invaluable insights, most multiple-case studies are likely to be stronger than single-case studies. Compared with doing a single-case study, trying even a "two-case" design is therefore a worthy objective. Case studies also can be used in combination with other methods, as part of a larger mixed-methods study.

# 2

# DESIGNING CASE STUDIES

## Identifying Your Case(s) and Establishing the Logic of Your Case Study

## GENERAL APPROACH TO DESIGNING CASE STUDIES

Chapter 1 has shown when you might choose to do case study research, as opposed to other types of research, to carry out a new study. The next step is to design your case study. For this purpose, as in designing any other type of research, you need a *research design.*

The research design will call for careful craftwork. Unlike other research methods, a standard catalog of case study designs has yet to emerge. There are no textbooks, like those in the biological and psychological sciences, covering such design considerations as the assignment of subjects to different groups, the selection of different stimuli or experimental conditions, or the identification of various response measures (see Cochran & Cox, 1992; Fisher, 1990; Sidowski, 1966). In an experiment, each of these choices reflects an important logical connection to the issues being studied. Nor have any common case study designs emerged—such as the *panel studies,* for example—used in surveys (see Kidder & Judd, 1986, chap. 6).

One pitfall to be avoided, however, is to consider case study designs as a subset or variant of the research designs used for other methods, such as quasi-experiments (e.g., Campbell & Stanley, 1966; Cook & Campbell, 1979). For a long time, scholars incorrectly thought that the case study was but one type of quasi-experimental design (the "one-shot post-test-only" design—Campbell & Stanley, 1966, pp. 6–7). Although the misperception lingers to this day, it was later corrected when one of the original authors

### *Tip:* How should I select the case(s) for my case study?

You need sufficient access to the data for your potential case—whether to interview people, review documents or records, or make field observations. Given such access to more than a single candidate case, you should choose the case(s) that will most likely illuminate your research questions. Absent sufficient access, you may want to consider changing your research questions, hopefully leading to new candidates to which you do have access.

**Do you think access should be so important?**

made the following statement in the revision to his original work on quasi-experimental designs:

> Certainly the case study as normally practiced should not be demeaned by identification with the one-group post-test-only design. (Cook & Campbell, 1979, p. 96)

In other words, the one-shot, posttest-only design as a quasi-experimental design still may be flawed, but case studies have now been recognized as something different, with their own research designs.

Unfortunately, case study designs have not been codified. The following chapter therefore expands on the ground broken by earlier editions of this book and describes a basic set of research designs for doing single- and multiple-case studies. Although these designs will need to be modified and improved in the future, they will nevertheless help you to design more rigorous and methodologically sound case studies.

## Definition of Research Designs

Every type of empirical research study has an implicit, if not explicit, research design. In the most elementary sense, the design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions. Colloquially, a research design is *a logical plan for getting from here to there,* where *here* may be defined as the set of questions to be addressed, and *there* is some set of conclusions about these questions. Between *here* and *there* may be found a number of major steps, including the collection and analysis of relevant data. As a summary label, another textbook has labeled a research design as a *logical model of proof* (Nachmias & Nachmias, 2014).

Another way of thinking about a research design is as a "blueprint" for your research, dealing with what questions to study, what data are relevant, what data to collect, and how to analyze the results (Philliber, Schwab, & Samsloss, 1980).

Note that a research design is more than a work plan. The design's main purpose is to avoid the situation in which the evidence does not address the research questions. In this sense, the design deals with a *logical, not* a *logistical,* problem. For example, suppose you want to study a single organization. Your research questions have to do with the organization's competitive or collaborative relationships with other organizations. You can properly address such questions only if you collect information from the other organizations, not just the one you started with. If you examine the relationships from the vantage point