6e

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CASE STUDY RESEARCH and APPLICATIONS

Design and Methods

graphically as a Level One inference in Figure 2.2.[1] This method of generalizing is commonly followed when doing surveys (e.g., Fowler, 2014; Lavrakas, 1993) or analyzing archival data such as in studying housing or employment trends. As another example, political polls need to generalize their findings beyond their sample of respondents and to apply to the larger population, and research investigators readily follow statistical procedures to determine the confidence with which such extrapolations can be made.

A fatal flaw in doing case studies is to consider statistical generalization to be the way of generalizing the findings from your case study. This is because your case or cases are not "sampling units" and also will be too few in number to serve as an adequately sized sample to represent any larger population.

Generalizing from the case study, not from the case(s).

Rather than thinking about your case(s) as a sample, you should think of your case study as the opportunity to shed empirical light on some theoretical concepts or principles. The goal is not unlike the motive of a laboratory investigator in conducting and then learning from a new experiment. In this sense, both a case study and an experiment have an interest in going beyond the specific case or experiment. Both kinds of studies are likely to strive for generalizable findings or lessons learned—that is, analytic generalizations—that go beyond the setting for the specific case or experiment that had been studied. (Also see Tutorial 2.1 on the companion website at study.sagepub.com/yin6e for more detail about defining "analytic generalization.")

For example, the lessons learned could assume the form of a *working hypothesis* (Cronbach, 1975), either to be applied in reinterpreting the results of existing studies of other concrete situations (i.e., other case studies or experiments) or to define new research focusing on yet additional concrete situations (i.e., new case studies or experiments). Note that the aim of an analytic generalization is still to generalize to these other concrete situations and not just to contribute to abstract theory building. Also note that the generalizations, principles, or lessons learned from a case study may potentially apply to a variety of situations, well beyond any strict definition of the hypothetical population of "like cases" represented by the original case (Bennett, 2010).

The theory or theoretical propositions that went into the initial design of your case study, as empirically enhanced by your case study's findings, will have formed the groundwork for your analytic generalization(s). Alternatively, a new generalization may emerge from the case study's findings alone. In other words, the *analytic generalization* may be based on either (a) corroborating, modifying, rejecting, or otherwise advancing theoretical concepts that you referenced in designing your case study or (b) new concepts that arose upon the completion of your case study.

The important point is that, regardless of whether the generalization was derived from the conditions you specified at the outset or uncovered at the conclusion of your case study, the generalization will be at a conceptual level higher than that of the specific case (or the subjects participating in an experiment[2])—shown graphically as a Level Two inference in Figure 2.2. By moving to this higher conceptual level, also realize that you need to make an analytic generalization as a claim, by providing a supportive argument. Your experience will be far different from simply applying the numeric result

emanating from the use of some formulaic procedure, as in making statistical generalizations. However, the implications for your analytic generalization can lead to greater insight about the "how" and "why" questions that you posed at the outset of your case study.

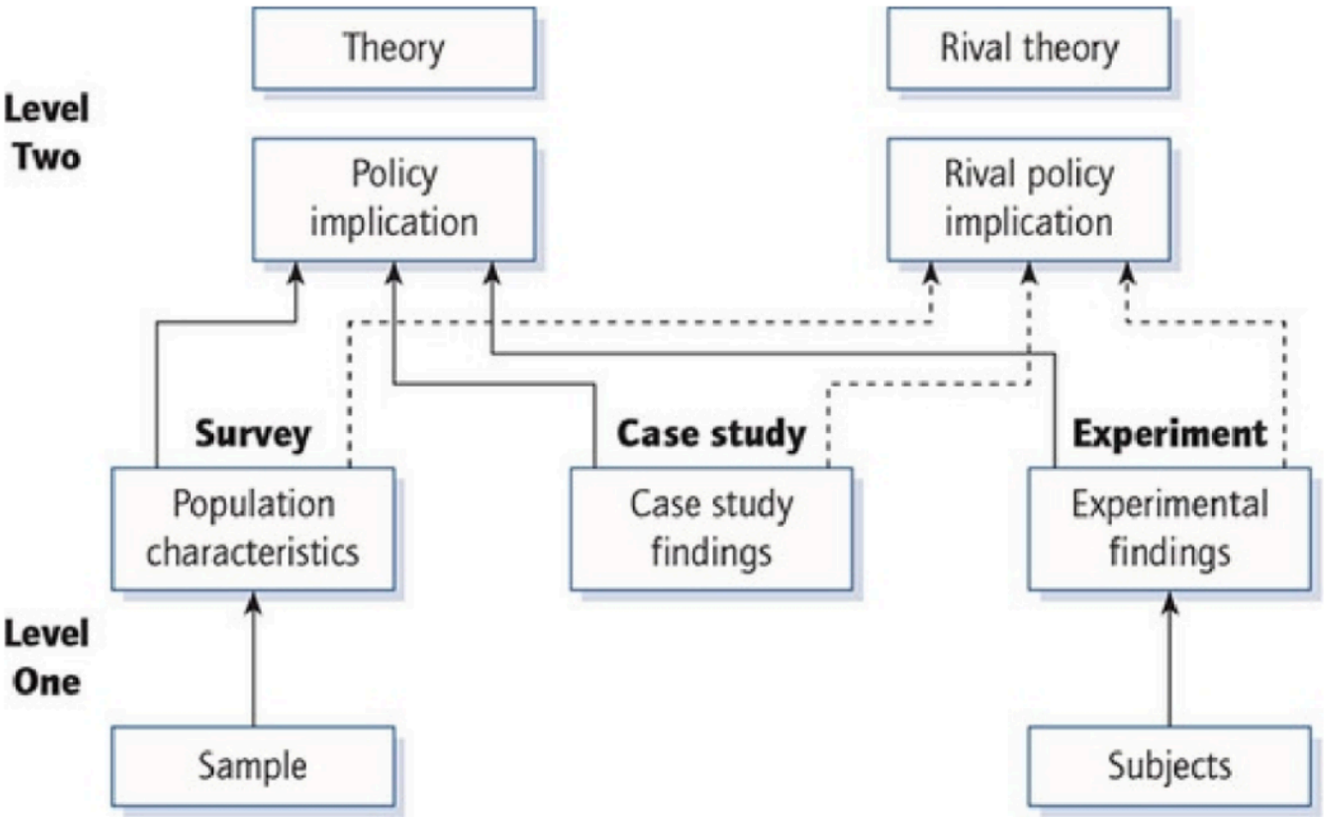

Figure 2.2 Making Inferences: Two Levels

Illustrative examples.

Several prominent case studies illustrate how analytic generalizations can use a case study's findings to implicate new situations. First, consider how the two initial case studies highlighted in BOXES 1 and 2A of Chapter 1 of this book treated the generalizing function:

BOX 1: Allison's (1971) case is about the Cuban missile crisis, but he relates the three theoretical models from his case study to many other situations, first to other international confrontations, such as between the United States and North Vietnam in the 1960s (p. 258). The later edition of his case study (Allison & Zelikow, 1999) then discusses the models' relevance to the "rethinking of nuclear threats to Americans today" (p. 397) as well as to the broader challenge of inferring the motives underlying actions taken by a foreign power.

BOX 2A: Whyte's study (1943/1993) is well known for uncovering the relationship between individual performance and group structure, highlighted by a bowling tournament where he directly experienced the impact on his own performance ("as if something larger than myself was controlling the ball"— p. 319) and observed how the gang members' bowling scores, with one notable

exception, emulated their standing in the gang. Whyte generalizes his findings by later commenting that “I believed then (and still believe now) that this sort of relationship may be observed in other group activities everywhere” (p. 319).

Second, BOX 7 contains four additional illustrations. All show how findings from a single-case study nevertheless can be generalized to a broad variety of other situations. The fourth of these case studies has one other notable feature: It demonstrates how an entire case study can be published as a journal article (the first three examples appeared in the form of rather lengthy books).

Analytic generalization can be used whether your case study involves one or several cases, which shall be later referenced as single-case or multiple-case studies. Also to come later in this chapter, the discussion under the topic of *external validity* adds a further insight about making analytic generalizations. The main point at this juncture is that you should try to aim toward analytic generalizations in doing case studies, and you should avoid thinking in such confusing terms as “the sample of cases” or the “small sample size of cases,” as if a single- or multiple-case study were equivalent to respondents in a survey. In other words, again as graphically depicted in Figure 2.2, you should aim for Level Two inferences when generalizing from case studies.

In a like manner, even referring to your case or cases as a “purposive sample” may raise similar conceptual and terminological problems. You may have intended to convey that the “purposive” portion of the term reflects your selection of a case that will illuminate the theoretical propositions of your case study. However, your use of the “sample” portion of the term still risks misleading others into thinking that the case comes from some larger universe or population of like cases, undesirably reigniting the specter of statistical generalization. The most desirable posture may be to state a clear caveat if you have to refer to any kind of sample (purposive or otherwise). (The preferred criteria and terminology for selecting cases, as part of either a single- or a multiple-case study, are discussed later in this chapter under the topic of “case study designs.”) In this sense, case study research directly parallels experimental research: Few if any people would consider that a new experiment should be designed as a sample (of any kind) from a larger population of like experiments—and few would consider that the main way of generalizing the findings from a single experiment would be in reference to a population of like experiments.

Box 7 Generalizing From Single-Case Studies: Four More Examples

... **Critical** Case as a Single-Case Study One rationale for selecting a single-case rather than a multiple-case design is that the single-case can represent the **critical** test of a significant theory. Gross, Bernstein, and Giacquinta (1971) ...