How to Conduct a Mixed Methods Study: Recent Trends in a Rapidly Growing Literature

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Annu. Rev. Sociol. 2011. 37:57–86

First published online as a Review in Advance on April 15, 2011

The *Annual Review of Sociology* is online at soc.annualreviews.org

This article's doi: 10.1146/annurev.soc.012809.102657

0360-0572/11/0811-0057$20.00

Keywords

qualitative versus quantitative, multimethod research, research design, methodology, formal models

Abstract

The present article selectively reviews the large number of recent studies that have been described as based on mixed methods. I begin by discussing a body of work that has emerged to promote mixed methods research across the social sciences. I then review and critique empirical studies in each of two general approaches to mixed methods: mixed data–collection studies, which combine two or more kinds of data; and mixed data–analysis studies, which combine two or more analytical strategies, examine qualitative data with quantitative methods, or explore quantitative data with qualitative techniques. I argue that, although mixed methods research is by no means new, empirical studies today combine methods in more diverse and, at times, innovative ways. Nevertheless, important methodological tensions will likely surface as the research becomes more self-reflexive.

INTRODUCTION

The twenty-first century has seen a remarkable number of publications that identify themselves as based on mixed methods. It is a surprising turn of events. As recently as the 1980s, many researchers were still debating whether quantitative or qualitative methods were superior, reflecting an un-catholic approach to social science methods that threatened to splinter sociology (see Collins 1984). While such attitudes have not disappeared, alternatives have certainly flourished. Today, methodologists of one stripe routinely promote the value of methods different from their own, as when demographers openly call for more "qualitative research" to answer the questions that their own methods cannot address (Goergin 2003, p. 89). In fact, social scientists appear increasingly willing to embrace mixed methods in a number of different forms, as demographers collaborate with interviewers (England & Edin 2007), analysts of narrative adopt formal modeling methods (Franzosi 1994), and methodologists create techniques to transcend opposing epistemological traditions (Ragin 1987, 2008). An entire field has emerged to promote mixed methods research, an effort supported by new journals, handbooks, and dedicated conferences.

A measured assessment of what these studies have accomplished is in order. Observers would be right to wonder whether these studies have accomplished something useful, effective, or innovative. Empirical researchers would be right to wonder what strategies scholars have employed, even if only to learn the scope of possible designs. In what follows, I review recent empirical studies that in one way or another employ mixed methods, addressing both theoretical and methodological issues, but focusing primarily on the concerns of the empirical researcher.

My approach is explicitly selective. Mixed methods research is now common in many fields in sociology, such as education, organizations, movements, health, and social policy. There are thousands of studies, far too many for a single review. Nevertheless, as discussed below, there are not thousands of different models. At this juncture in the development of the literature, what is most useful to an empirical researcher is not an attempt to cover studies in every field—particularly studies that, while making different contributions to different topics, do not vary at all in design—but a review of the range of available designs, including their merits and their potential problems. Thus, readers will find that I have passed over mixed methods studies that may have been substantively influential in a given field, because the most substantively important are not necessarily the most methodologically illustrative. My aim is to attain comprehensiveness with respect not to the substantive topics but to the range of available models. Substantive reviews of the particular subfields are available through the Annual Reviews series. I impose one further constraint. As I show below, the evolution of the literature over the past ten years justifies speaking of a distinctly twenty-first-century growth in the prevalence of mixed methods research, one accompanied by the first dedicated journals, the first international conferences on mixed methods research, and the first concerted (as opposed to independent) attempts at codification. I focus on that period. Those wishing reviews of the earlier work in sociology should consult Brewer & Hunter (1989) and Tashakkori & Teddlie (1998).

DEFINING THE MIXED METHOD STUDY

Characterizing a study as mixed method is not a straightforward task. It is easy to recognize as mixed method a quantitative survey supplemented by qualitative interviews. But what if the interviews are supplementing a (qualitative) focus group? Must the study combine qualitative and quantitative methods? If so, how are these defined? By whether the sample size is small or large? By whether the study can identify mechanisms? If so, what is a mechanism? And what constitutes combining? Social scientists have proposed a wide range of answers to these questions. As a result, even though

the term "mixed method study" is ubiquitous, consensus on its meaning has been elusive (Griffin & Ragin 1994; Teddlie & Tashakkori 2003, pp. 10–14; for a sense of the diversity of approaches and definitions, see Campbell & Fiske 1959; Morse 1991; Sherman & Strang 2004; Axinn & Pearce 2006; Brewer & Hunter 2006; Greene 2007; Ridenour & Newman 2008; Smith 2008; Paluck 2010; and S. Domínguez & B. Hollstein, manuscript submitted).

The disagreements are not merely semantic; they reflect substantive differences over the proper way to categorize and understand methods. Much of the diversity reflects differences over (*a*) what the terms "quantitative" and "qualitative" refer to and (*b*) what elements of the research process authors believe are being mixed. For example, some use the term "quantitative" to characterize studies based on large samples, such as the Panel Study of Income Dynamics or the World Values Survey. Others use it to describe any studies that use formal mathematical models when analyzing data, even when the sample size is small—for example, studies using social network analysis to examine relations among just two dozen managers. By contrast, some use the term "qualitative" to describe all small-sample studies, regardless of whether the analysis is formal, because they consider those studies to lack statistical generalizability. Others use "qualitative" to characterize any approach in which units (such as organizations or nations), regardless of their number, are analyzed as cases rather than divided into variables, such as studies of revolutions in which countries are assessed in light of their particular historical circumstances. Still others use the term to refer only to studies that rely on hermeneutic or interpretive, rather than positivistic orientations. Because of these differences, the quantitative versus qualitative opposition has been used to contrast many kinds of alternative studies: large-*n* versus small-*n*, nomothetic versus idiographic, causal versus interpretive, variable-based versus case-based, explanatory versus descriptive, probabilistic versus deterministic, and numerous others (see, e.g., Ragin 1987, Lieberson 1991, King et al. 1994, Yin 1994, Singer et al. 1998, Bernard 2002, Duncan 2008).

In addition, these distinctions have contrasted different elements of the research process, including the choice of sample size, the logic of data collection, the approach to analysis, and the general orientation toward knowledge. For example, for those who believe the quantitative-qualitative distinction refers to large- versus small-sample studies, the core issue is combining the type of data employed, not the ensuing analysis; for those who believe it refers to variable- versus case-oriented studies, the core issue is the analytical logic, not the sample size; for those who believe it refers to formal versus interpretive analyses, the issue is neither sample size nor analytical logic but the presence or absence of mathematical modeling. As a result of these differences in perspective, a small-sample study that employs formal mathematical models may be called quantitative by some, qualitative by others, and mixed by still others. For this reason, although the existing conventions work well enough in everyday scholarly discourse—particularly because authors have typically worked in separate scholarly communities—the conventions complicate the task of defining the works to be reviewed. When used as all-encompassing markers, qualitative and quantitative refer to categories that are neither clearly bound nor mutually exclusive; by extension, there is no self-evident domain to which mixed quantitative and qualitative refer.

The present paper is not the place to make the case for yet another definition. The issues are complex enough to have required entire volumes, and no consensus is likely to emerge in the near future (interested readers should consult Ragin 1987, Yin 1994, Brewer & Hunter 2006, Ridenour & Newman 2008, and Smith 2008). Nonetheless, clarifying some terms will benefit our discussion.

Because different studies have mixed different things and in different ways, I distinguish among types of data, data collection, and data analysis. The first refers to that which has been

collected for study; examples are interview transcripts, survey responses, newspaper clippings, field notes, and administrative records. The second refers to the means for obtaining data; examples are interviewing, participant observation, focus group administration, controlled experimentation, and archival investigation. The third refers to the means for making sense of the collected data; these include general approaches such as case study, regression, and social network analyses, as well as specific techniques such as open coding, matching on propensity scores, and multidimensional scaling.

I define as mixed data–collection studies those based on at least two kinds of data (such as field notes and administrative records) or two means of collecting them (such as interviewing and controlled experimentation). I define as mixed data–analysis studies those that, regardless of the number of data sources, either employ more than one analytical technique or cross techniques and types of data (such as using regression to analyze interview transcripts). This categorization helps avoid some pitfalls of the standard quantitative-qualitative distinction, which is too crude for present purposes. In what follows, the terms "quantitative" and "qualitative" are used only as shorthand, referring not to overall methods that somehow cut across all stages of research, but to kinds of data, or collection, or analysis, with further clarifications as the discussion warrants.

The rest of the review is organized around four sections. Immediately below, I assess the emergence of a field devoted to developing mixed methods research as an independent object of inquiry. Next, I selectively review recent trends in mixed data collection and then those in mixed data analysis. I conclude by discussing remaining issues that future mixed methods researchers are likely to face in practice. I argue that, although mixed methods research is by no means new, empirical studies today combine methods in more diverse and often innovative ways. Nevertheless, the literature displays both promising innovations and questionable practices, partly as a result of methodological uncertainties that sociology as a whole has not resolved.

THE EMERGENCE OF THE MIXED METHODS RESEARCH FIELD

One of the most important developments over the past decade has been the growth of an interdisciplinary community of scholars devoted to cataloguing, developing, and promoting mixed methods research (Tashakkori & Teddlie 2003). These scholars, in disciplines as diverse as sociology, education, evaluation, and health studies, have assembled a large empirical literature, developed a common language, established a growing canon, and set many of the terms of the debate over the proper ways to conduct mixed methods research. They have worked diligently to establish mixed methods research as a field of investigation in its own right, performing the boundary work and institutionalization characteristic of new fields (Gieryn 1983, Lamont & Molnar 2003).

Whether the community of scholars will succeed in forming a stand-alone field remains an open question. In fact, they face serious skeptics, even among those who strongly support mixed method research in practice, who question the need for an independent field and wonder whether differentiating mixed method research will marginalize mixed empirical studies among the traditional disciplines (see Brewer & Hunter 1989, Miller & Gatta 2006). Nonetheless, although the field in formation has yet to fully crystallize intellectually, it has certainly done so institutionally via journals, conferences, and volumes, and it has been instrumental to the proliferation of empirical mixed methods studies over the past decade.

Foundations

Although one can find mixed methods studies throughout the history of the social sciences, many commentators trace the origins of the modern work to a set of publications in psychology, sociology, and evaluation methods that, from several different perspectives and

beginning in the late 1950s, called on researchers to employ multiple methods. In psychology, the influential "multitrait-multimethod matrix" paper by Campbell & Fiske (1959) proposed obtaining convergent and discriminant validity by measuring multiple substantive traits (such as assertiveness, seriousness, etc.) from multiple sources (such as self-reports, reports by peers, etc.). Although that argument was not about mixed but about quantitative data collection, the core principle of multimethod confirmation—that confidence in one's findings increases when different methods are in agreement—became, as discussed below, a foundation for several approaches to mixed methods research (see also Bollen & Paxton 1998). In sociology, Sieber (1973), responding to the heated debates in sociology between ethnographers and survey interviewers (see Becker & Geer 1957, Trow 1957), argued that researchers should "integrate" fieldwork and survey methods because of their complementary strengths and weaknesses. This integration, he argued, could lead to "a new style" of research in which the two methods ceased to be viewed as epistemologically incompatible and in which researchers no longer felt compelled to choose sides. In evaluation research, Reichardt & Cook (1979) asked their colleagues to move "beyond qualitative versus quantitative" methods by rejecting the idea that epistemological paradigms necessarily led to particular methodological techniques (see Cook & Reichardt 1979). Similarly, Bryman (1988), consistent with Sieber, argued that the differences between qualitative and quantitative methods had been exaggerated and that the methods could be profitably "integrated." In one of the first sociological studies aimed at cataloguing and systematizing the use of multiple methods, Brewer & Hunter (1989) called for a "multimethod" strategy in which the key empirical objective was triangulation—pointing out that, quantitative versus qualitative debates aside, many of the best sociological studies of the twentieth century had, in fact, been based on multiple and diverse sources of data. Furthermore, the authors argued that multimethod thinking could and should inform all stages of the research process, from problem definition through write-up, rather than only measurement or the assessment of evidence. These and other works created a kind of canon on which the contemporary scholars have built.

Today the field in formation flourishes. With contributions from sociology, educational research, health studies, policy evaluation, and psychology, several volumes and handbooks have addressed the scope, rationale, and challenges of mixed methods research (Brewer & Hunter 2006, Creswell & Plano Clark 2007, Greene 2007, Ridenour & Newman 2008, Smith 2008, Teddlie & Tashakkori 2009). Tashakkori & Teddlie (2003) provided a landmark contribution in their *Handbook of Mixed Methods in Social and Behavioral Research*, which at more than 700 pages contains contributions from many of the researchers who have devoted the past two decades to building the intellectual enterprise. The field in formation now boasts two dedicated journals (both founded in 2007), the *Journal of Mixed Method Research* and the *International Journal of Multiple Research Approaches*, and its contributors also often publish in the pages of two long-standing methodological journals, *Quality and Quantity* (e.g., Sale & Brazil 2004, Latcheva 2011, Onwuegbuzie et al. 2011) and *Field Methods* (e.g., Annechino et al. 2010, Plano Clark et al. 2010, Wutick et al. 2010). Finally, since 2005, a yearly Mixed Methods Research Conference has been held in the United Kingdom, moving to the United States in 2010.

Many of the debates among this community of scholars have centered on issues important to those attempting to develop a distinctive mixed methods approach. Examples are the extent to which alternative methodological "paradigms" are incompatible, the appropriateness of a quantitative-qualitative dichotomy to characterize research practices, and the extent to which mixed methods might constitute an alternative, not merely derivative, methodological strategy (see Tashakkori & Teddlie 2003, Greene 2007, Onwuegbuzie et al. 2009). These

and other debates are ongoing. Researchers wishing to examine these questions should consult the most prominent contributors to the debates, including Creswell (Creswell et al. 2003, Creswell & Plano Clark 2007), Greene (Greene et al. 1989, Caracelli & Greene 1993, Greene 2007), Morse (1991, 2003), Onwuegbuzie (Johnson & Onwuegbuzie 2004, Onwuegbuzie 2007, Onwuegbuzie et al. 2007, Onwuegbuzie et al. 2009), and Tashakkori & Teddlie (1998, 2003; Teddlie & Tashakkori 2003). Collectively, these and other authors have produced a large, influential, and highly self-referential literature that has set the terms of much of the debate within the field.

At the same time, researchers across the social sciences have developed independent, often smaller literatures on mixed methods that rarely overlap with the aforementioned field. For example, demographers Axinn & Pearce (2006) in their *Mixed Method Data Collection Strategies* covered a large literature in demography, sociology, and economics but cited none of the aforementioned authors, who themselves have rarely cited Axinn & Pearce. Political scientist Lieberman's (2005) highly cited review of strategies for combining large-sample and small-sample data made no mention of Tashakkori, Onwuegbuzie, Axinn, or Pearce—who themselves have largely neglected Lieberman's work. Engel (2007, p. 257), working in the realm of social policy, argues that "little research exists on what can be gained from mixed methods studies" (see England & Edin 2007) but cites none of these authors, who have published dozens of works addressing precisely that question—several of them, in turn, have also ignored the mixed methods research in major areas of U.S. poverty-related policy. The exception that proves the rule may be Yoshikawa et al. (2008), a review in developmental psychology that attempts to span these several literatures. Exceptions aside, the nonoverlapping literatures bear evidence to a field still in formation.

A Mixed Methods Perspective?

Champions of the idea of a distinct mixed methods field have sought to define the field by identifying a perspective or standards of evidence unique to mixed methods research (Sale & Brazil 2004; Denscombe 2008; Greene 2008; Ridenour & Newman 2008; Dellinger & Leech 2007, p. 321ff). Their challenge has been to build an epistemological foundation that would establish mixed methods as a stand-alone perspective, rather than a mere combination of approaches from existing disciplines, such that empirical researchers designing a mixed-data project could not rely solely on training in the separate conventional methods but would require specialized knowledge in the art and science of mixing itself (see Onwuegbuzie 2007).

In pursuit of that epistemological foundation, authors have increasingly turned to pragmatism (e.g., Rallis & Rossman 2003, Johnson & Onwuegbuzie 2004, Greene 2007, Morgan 2007, Denscombe 2008). For some, the term pragmatism has been little more than a synonym for practice orientation, in the sense of an inclination to abandon abstract questions in favor of concrete practice. Others have tried more earnestly to develop a pragmatism-based, mixed methods epistemological perspective. The basic belief is that pragmatism, by prioritizing the act of discovery over the justifications for knowledge, may provide the appropriate theoretical scaffolding. Several authors have relied on the pragmatist critique of foundationalism, of the idea that all truth-seeking must be based on a clear foundation of how knowledge is acquired (Rorty 2009 [1979]). For example, Maxcy (2003, p. 85) argued that pragmatism provides the foundation for researchers to work "without the need to identify invariant prior knowledges, laws, or rules governing what is recognized as 'true' or 'valid.'" Feilzer (2010, p. 8) suggested that pragmatism encourages researchers to set aside considerations about what is ultimately true in favor of what is ultimately useful and to remain comfortable with uncertainty and that it orients itself toward solving practical problems in the "real world." Scott & Briggs (2009, p. 225) contended that, in pragmatism, "epistemology is empirical, not foundational," such that the primary basis for knowledge is sense experience—that is,

what the observer can independently see, hear, smell, taste, and touch. Abstract rationalizations of the foundations of knowledge become less important: The "core pragmatist idea of warranted assertions arising only from directed inquiry means that no presupposition about the nature of the social world is needed. The only statements that are warranted are those that derive from the process of research, but the norms and standards of the 'warrant' are socially constructed and variable across time" (Scott & Briggs 2009, p. 229). Collectively, these authors suggest that the pragmatist researcher is first and foremost concerned with an empirical puzzle, solving it through whatever means appear useful in the process. This kind of an orientation naturally makes room for multiple methodological perspectives.

Nevertheless, these efforts leave many questions unanswered. For example, it is not clear how pragmatist researchers would adjudicate among competing mixed methods research designs if both could produce practically useful knowledge, both relied on sense experience, or both were consistent with existing epistemologies. (I present examples below.) Pragmatism may turn out merely to help authors avoid, rather than address, important questions.

In the short term, the field in formation devoted to mixed methods enjoys the productivity, dedicated journals, and intuitive appeal required for sustainability. But the pressures of specialization, and some of the literature's insularity from advanced methodological research in traditional disciplines, threaten its development. Regardless, the work of these scholars has provided support for empirical researchers in the traditional disciplines to leap from more stable footing onto mixed methods data collection and analysis.

TRENDS IN MIXED DATA COLLECTION

Most empirical mixed methods studies in recent years have employed two or more different types of data or data collection techniques. The most notable characteristic of the literature is its diversity: Whereas mixed methods may have once referred primarily to a survey with a few follow-up interviews for "added context," today researchers have developed more complex designs, combined more diverse kinds of data, and integrated different kinds of data into their analyses more carefully than in the past. The literature may be categorized according to three criteria: the purported motivations to combine different types of data, the extent of sequencing of the data collection, and the level of nesting of the multiple data sources. (For other categorizations, see Morse 1991, Fine & Elsbach 2000, Creswell et al. 2003, Johnson & Turner 2003, Leech & Onwuegbuzie 2009, Creswell & Plano Clark 2007.) I discuss each in turn.

Motivations

Why employ more than one kind of data in a single study? While researchers in recent years have proposed a number of answers, most of these can be subsumed under one of two categories, confirmation or complementarity. (For other approaches to motivating mixed methods data collection, including practices less prevalent in sociology, see Sieber 1973; Greene et al. 1989; Newman et al. 2003; Greene 2007, pp. 98–104.)

Confirmation. Many recent studies have been motivated by the wish to verify the findings derived from one type of data with those derived from another (Cherlin et al. 2004, Pager & Quillian 2005, Miller & Gatta 2006, Engel 2007, Moore 2008, Slonim-Nevo & Nevo 2009). This approach is sometimes referred to as triangulation, wherein researchers collect different kinds of data to measure the same phenomenon (Kadushin et al. 2008; on other definitions of triangulation, see Campbell & Fiske 1959, Jick 1979, Brewer & Hunter 2006). Researchers have used confirmatory designs when attempting to ensure that their findings do not depend primarily on the particular kind of data collected—e.g., on whether researchers conducted a focus group instead of one-on-one interviews.

Some examples illustrate. In her study of power relations in black lesbian stepfamilies, Moore (2008) used multiple kinds of data to confirm what each separate data source was uncovering; she used a structured survey of 100 women in lesbian households with at least one black partner (focusing on the third in which one partner brought her children into the relationship), 30 months of participant observation with the women, in-depth interviews with two dozen women, and a focus group on household decision making composed primarily of members of her sample (Moore 2008, pp. 340–41). (For comparison, she also relied on more limited data on lesbian households of different compositions.) In the survey, interviews, and focus groups, the women consistently reported the same things about their relationships: In contrast to findings among upper-income whites, they valued economic independence over egalitarianism, and control over household decision making ultimately accrued to the biological mother of the child, rather than necessarily the highest earner. Other studies take confirmatory designs further by designing instruments such that the same variables are collected from each of the alternative types of data (see also Campbell & Fiske 1959). Cherlin et al. (2004) studied the relationship between experiencing sexual and physical abuse and later forming a family. The authors conducted a survey of more than 2,000 children and their caregivers in Boston, Chicago, and San Diego in 1999 and interviewed more than 250 separate families in the same cities between 1999 and 2003. They asked the same questions in both the survey and the interviews (in addition to using the interviews and conducting ethnographic observation to probe deeper; Cherlin et al. 2004, pp. 772–73). The surveys revealed that women who reported past abuse were less likely to marry; the in-depth interviews confirmed the pattern.

The promise of confirmatory designs is clearest when the alternative types of data produce conflicting results. Pager & Quillian (2005) compared what employers said during telephone interviews about their hiring procedures to what the employers did in practice. The authors sent matched black and white auditors who varied in drug offenses to apply (separately) to a total of 350 jobs in Milwaukee; the authors then separately interviewed employers by phone, asking them, using vignettes describing hypothetical candidates who matched the characteristics of the auditors who had visited them earlier, how likely they were to hire the hypothetical applicant. The authors found that, although in the interviews the employers were no more likely to report a willingness to hire the white hypothetical applicants, in the audit they called back white applicants at substantially higher rates than they did black ones. Studies based solely on employer surveys, it seems, may understate the extent of discrimination. Similarly, S. Kimelberg (unpublished manuscript) used data on approximately 60 adult Puerto Rican and African American New Yorkers who had participated in a large survey and were subsequently interviewed in depth. She compared answers to similar questions and found substantial discrepancies. For example, more than half of respondents provided contradictory answers when asked whether race relations were improving or deteriorating. The repeated discovery of contradictions of this nature has convinced many of the indispensability of mixed data collection, because they make conventional single-source findings suspect (see Slonim-Nevo & Nevo 2009, Wutick et al. 2010; also Tashakkori & Teddlie 2003).

Complementarity. Others have argued that the greatest value in combining types of data lies in the ability of one type to compensate for the weaknesses of the other (Brewer & Hunter 1989, 2006; Scrimshaw 1990). Researchers have used complementary designs when they are reluctant to limit the kind of knowledge gained to that which a type of data can produce. The core assumption is that any given type of data can produce only a given kind of knowledge.

During the 2000s, most mixed data–collection studies in the major sociological journals and academic presses have used complementary, rather than confirmatory designs (e.g.,

Klinenberg 2002, Barnett & Woywode 2004, Obstfeld 2005, Mische 2008, Fernandez-Mateo 2009, Taylor et al. 2009, Small 2009a). Most of these studies have employed one of two approaches: (*a*) using either textual or small-sample (qualitative) data to interpret the results derived from large-sample (quantitative) data and (*b*) using large-sample (quantitative) data to test the results derived from small-sample (qualitative) data.

Many researchers have used interviews, archival investigation, or participant observation to interpret results derived from large-sample data (e.g., Obstfeld 2005; Giordano et al. 2006; Small 2009a; Harding 2009, 2010; Briggs et al. 2010). For example, in a recent study of participation in the 2004 same-sex wedding protest in San Francisco, Taylor et al. (2009) mailed surveys to 1,000 randomly sampled participating couples and conducted interviews with more than two dozen participating couples identified through snowballing. The survey suggested, among other things, that most couples who married did so in part for political, not merely personal, reasons. The interviews revealed the source of this political orientation: Couples' experience with previous movement tactics had convinced them that public actions of this kind were symbolically important in the political sphere. Even though participants expected the courts to nullify the marriages, they wished to support a political movement and express a personal identity. Not all complementary interpretive studies have been based on interviews or small samples. To examine the precursors of age discrimination in the workplace, Roscigno et al. (2007) examined all 2,181 verified cases of age discrimination filed against employers in Ohio from 1988 to 2003. The regression-based analysis uncovered that those most likely to be fired without just cause were skilled and semiskilled workers either nearing 50 or close to retirement. The authors' qualitative analysis of a random sample of 120 case records—20- to 120-page text documents containing first-hand accounts, employer responses, witness statements, and depositions—showed that many firings were due to stereotypes and preconceptions about physical or mental ability, considerations of future human capital investment, and beliefs about customer preferences for younger workers. As in this discrimination study, in the best complementary studies of this type, the small-sample or textual data have been used not merely for illustration but to provide a depth of interpretation unavailable from the large-sample data.

Other researchers have used large-sample (quantitative) data to test hypotheses derived from smaller samples, field-based data, or textual data (e.g., Kurzman & Leahy 2004, Fernandez-Mateo 2007). This approach often produces and tests hypotheses not previously assessed in the literature. For example, Small et al. (2008) examined the secondary roles that childcare centers in New York City played in the lives of parents. They first interviewed directors in nearly two dozen centers and other providers in the city and uncovered that many centers provided parents access to resources such as free health exams and substance abuse counseling through their organizational networks. The authors then designed a survey to assess the generalizability of these findings and administered it to nearly 300 randomly sampled New York City center directors. They found that most centers facilitated access to other resources through their networks, that such practices were more common in centers in poor neighborhoods, and that the poverty level of the children served did not account for the prevalence of such practices in poorer neighborhoods. Uzzi (1999) examined how social ties between banks and mid-size firms and the firms' social networks affect both loan acquisition and costs of financing. He first interviewed more than two dozen bankers in 11 banks in Chicago about their practices and uncovered that strengthening one-to-one relationships with banks seemed to increase firms' access to and reduce their costs of financing. He also found that having a network with a complementary mix of both embedded ties and arm's-length ties provided benefits superior to those derived from having primarily either one or the

other. He then tested these hypotheses on the large, federally administered National Survey of Small Business Finances. He found, among other things, that both an additional year in a relationship and an additional dimension of multiplexity reduced a firm's interest rate by a small but statistically significant percentage. Explicit tests of this kind—where researchers' hypotheses are directly informed by extensive small-sample, in-depth work—are some of the most tightly integrated mixed methods data collection studies in recent years. However, they are somewhat uncommon, in part because of the costs of collecting original large-sample data or the difficulty of finding the appropriate data in preexisting surveys.

Confirmation versus complementarity?

Some supporters of complementary approaches have argued that confirmation is a poor motivation of mixed data–collection research, because different types of data produce inherently different types of knowledge and, thus, cannot be used to verify one another (Sale et al. 2002). From this perspective, when researchers claim to be confirming findings across different kinds of data collection, they may be accomplishing something altogether different. For example, suppose Pager & Quillian (2005) had, in fact, found that employers' behavior (before the auditors) accurately reflected their statements (before the interviewers). This finding would not necessarily have constituted "confirmation"—it would merely have suggested that two different aspects of the phenomenon were uncovered: how employers perceive themselves and how they behave. From this perspective, confirmation would result only from, say, a separate audit study that arrived at the same audit findings. (Of course, an additional audit study would still not address the inherent limitations of audit studies, such as their inability to represent how much discrimination actually occurs in real world circumstances, where applicants of different racial backgrounds are often not equal on all other characteristics. For that issue, a complementary design would be appropriate.)

A recent study's approach to a complementary design demonstrates the analytical leverage to be gained from carefully distinguishing the objectives of complementing and confirming findings when designing mixed methods research. In an evaluation of an educational program designed for participants to experience Israeli culture, Kadushin et al. (2008) combined two quantitative sources in a strict confirmatory design and added a complimentary qualitative source to help account for differences in findings between the two quantitative sources. For the program, which is organized around educational bus tours, North American Jewish college students spent ten days in Israel learning history and cultural norms. One summer, the authors collected several kinds of data from more than 20 tour buses: quantitative ratings by observers of the performance of the guide and of group dynamics, quantitative ratings by tour participants of these same items, qualitative narratives of the tours by nonparticipant observers (over two of the ten days), and—in several of the tour buses—qualitative field notes of the entire experience by participant observers. In the quantitative rankings, the observers and participants agreed on several indicators of general effectiveness of the guide and guide's openness. However, an analysis that took into account the fact that 12 scales were measured suggested that, overall, the correlations between observers' and participants' ratings were not significant. The qualitative data helped explain why some buses were ranked higher than others and possibly why participants and observers disagreed: In the buses eventually ranked as ineffective, guides held the attention of only some participants. This failure to create what the authors call a "focal experience" could also help account for the weaker quantitative rankings. Kadushin and his colleagues, therefore, employed a complementary mixed methods approach to inform a quantitative confirmatory study, remaining clear of the precise strengths and weaknesses of each mode of data collection. Other approaches to combining confirmatory and

complementary objectives can be found in Uzzi (1999), Fernandez (2001), Correll et al. (2007), Fernandez-Mateo (2007), and Small (2009b).

Sequencing

Recent studies have also differed in their approach to the sequence of data collection. The basic issue is whether the two or more types of data are collected more or less simultaneously (concurrent designs) or one is preceded by the other for methodological reasons (sequential designs). For discussions, see Morse (1991, 2003) and Smith (2008). Please note that the present discussion refers to the collection of data, not to the presentation of findings. Many writers, for rhetorical or composition purposes, first present the findings from one kind of data and then those from another (sometimes even with "hypotheses" between them), even if the data were collected simultaneously. Instead, our discussion centers on the sequence of the actual data collection, where deciding to collect data in sequence rather than concurrently can be consequential.

Sequential designs. Sequential studies have exploited several of the advantages of mixed methods studies, such as the ability to understand the mechanisms behind newly discovered associations or to test emergent hypotheses (see Morse 1991, 2003; Tarrow 2004; Smith 2008). There have been many sequential studies in recent years (e.g., England & Edin 2007, Small et al. 2008, Bennett et al. 2009, Briggs et al. 2010). Johnston & Baumann (2007) studied why gourmet food writers in the United States considered eclectic, rather than Francophone, food and cooking to be high status. The authors first "inductively identified the major frames and ideologies" in the discourse by reading a broad range of contemporary gourmet food writing sources, with greater emphasis on four high-status gourmet food magazines (Johnston & Baumann 2007, pp. 176–77). They then examined the prevalence of these uncovered frames in more than 100 articles in a single year in three of the magazines. Their quantitative analysis uncovered that authors celebrated food through two dominant frames, authenticity and exoticism, which end up placing a premium on an eclectic (or "omnivorous") taste orientation. Their quantitative analysis, by building on frames they first identified inductively, documented the replacement of conventional high-status makers with eclectic ones in ways not previously uncovered in the literature. Slonim-Nevo & Nevo (2009) designed a confirmatory study that required data collection to be undertaken sequentially from a very different perspective. They surveyed more than 200 immigrant adolescents in Israel and assessed their school achievement, behavior in school, and general psychological state; students were assessed at the beginning and again at the end of the school year. Then, to assess the believability of the survey responses, 20 students who improved and 20 who worsened were selected for in-depth interviews. The researchers found that many in the improvement group actually reported (in the interviews) that their circumstances had deteriorated, whereas several in the worsening group believed their conditions had improved, calling into question the large-sample findings. At their best, sequential studies are fully iterative in nature. Pearce (2002) first used survey data on approximately 1,800 people in Nepal to examine how religion affected childbearing and preferences for family size. She then identified 28 "anomalous cases," those respondents in her sample with family-size preferences much larger than her statistical models predicted, and conducted one-on-one interviews with these respondents. From the fieldwork and interviews with these respondents, she learned, among other things, that religion was experienced in many respects at the household, not individual, level—young people, for example, often defined their religious identity mostly in light of their parents' and grandparents' beliefs. As a result, she ran a new set of regressions with measures of religious environment at the household level, substantially improving model fit. In short, Pearce used survey data collection and analysis to directly inform in-depth

interview data collection and analysis, which, in turn directly informed survey analysis. In all of these studies, the conclusions derived explicitly from a process in which prior data collection informed the nature and form of the subsequent alternative type of data. Their argumentative strength derives from their ability to resolve specific questions that emerge in the process of data collection with additional data collection.

Concurrent designs. Concurrent designs have been useful in studies where sequential designs were impractical, when the ordering of data collection was irrelevant, or when the need for multiple kinds of data for a given time period was pressing (e.g., McFarland 2001, Cherlin et al. 2004, Zuckerman & Sgourev 2006, Duncan et al. 2007, Kadushin et al. 2008, Fernandez-Mateo 2009). For example, in Mische's (2008) study of young activists in Brazil, the sequence of data collection was irrelevant. Over the course of several years, by interviewing the activists, fielding more than 300 standardized questionnaires, and conducting participant observation in several organizations, Mische (2008, p. 30) successfully uncovered that the activists' self-perception and partisanship were affected by their participation in multiple types of organizations. For her study, full immersion in the field was crucial; the particular order of data collection was not. Other researchers adopt concurrent designs in part due to the practical constraints on the window during which data collection can take place. Blatchford et al. (2002) studied how class size affects student-teacher interaction. Following the teachers of two cohorts of students over the course of an academic year, they collected data from a number of sources: They surveyed several hundred teachers in different classes each term on the number of minutes spent in a half day on teaching and nonteaching activities; they interviewed teachers each summer on their perceptions of the impact of class size; and they conducted general and systematic observations in samples of classes of varying size. Overall, they found that smaller classes were associated with more individual support for learning, a finding supported by a large amount of diverse data collected over the course of a year, something difficult to envision from a sequential design. Finally, concurrent designs have been useful when the question demanded that multiple data types be collected simultaneously, as in studies of transitions where qualitative and quantitative data are necessary to understand every stage of the transition. Fernandez (2001) examined how technological change affects workers' wages by studying a food-processing company as it moved operations from a 100-year-old facility to a new one that employed recent technological innovations. That natural transition afforded a valuable opportunity to examine the relationship between skills and wages—provided the author had comparable data on the reported and actual difficulty of performing the work before and after. Fernandez and his research assistants surveyed production workers on the difficulty of the work, conducted participant observation by taking temporary jobs, and obtained documentary data in both facilities. The data collection at both time points made clear that job-skill requirements had increased (a finding confirmed by participant observation, job documents, and surveys), while wages did not uniformly increase. The second plant exhibited greater wage inequality, but the extent of inequality was tempered by the company's guarantees to workers. The foundation of Fernandez' argument, that skill requirements had, in fact, increased, was made stronger by its confirmation with the same before-and-after data from multiple sources.

Sequential versus concurrent designs? Naturally, the appropriateness of a sequential versus concurrent design depends on the particular question being asked. However, whether researchers worry at all about which approach to follow depends, in part, on whether they believe they must decide on the nature of the design before beginning the study, particularly when collecting ethnographic data. One of the consequences of the rise in mixed data–collection studies has been that researchers

have attempted to systematize and codify the process of ethnographic and interview-based data collection to help peer reviewers assess studies and funders evaluate proposals (see, e.g., King et al. 1994). Thus, the National Science Foundation recently released a set of guidelines to help researchers submit qualitative and mixed methods proposals in which clarifying and codifying the design to some extent before the start of the project was important (Lamont & White 2008; see also Ragin et al. 2004). Among others, Becker (2009) strongly objected to such recommendations, arguing that some of the best ethnographic research results from the absence of design, from the ethnographer's willingness to jump into the field and follow her or his instincts about which type of data to collect next based on what she or he is continuously discovering. This position, which is consistent with the long-standing grounded theory tradition (Glaser & Strauss 1967), is equally applicable to the mixed methods researcher. To the researcher adopting Becker's position, the distinction between sequential and concurrent designs is immaterial, because, once in the field, the researcher may decide to alter data collection as a function of emerging findings, even if a sequential approach had not been planned. To the researcher adopting a conventional design-based approach, decisions about which design to employ will almost always have to be made a priori.

Nesting

A third characteristic that has differentiated mixed data–collection studies in recent years is the extent to which the design employs nested data. Nesting refers to the extent to which multiple data types are collected from the same actors, organizations, or entities (Lieberman 2005). Only nesting permits within-subject confirmatory designs, which are useful when refining instruments; nesting also allows complementary designs to penetrate deeper into individual units (people, organizations, nation states, etc.) within an overall study. Non-nested studies, however, provide a flexibility that is useful in certain circumstances and a comprehensiveness that is necessary to understand multifaceted objects of study, such as communities or markets.

Nested designs. Nested designs have been popular. The most common nested study design continues to be the survey of individuals in which some respondents are selected for additional in-depth interviewing (e.g., Steele 1999, Pearce 2002, Clampet-Lundquist et al. 2006, England & Edin 2007, Kasinitz et al. 2008, Bennett et al. 2009, Briggs et al. 2010, DeLuca & Rosenblatt 2010). Today, however, the second samples tend to be larger and more deeply analyzed, such that the in-depth interviews serve not merely an illustrative function but rather an analytical one, most often of complementary interpretation. For example, while studying adolescent's perceptions of romantic relationships, Giordano et al. (2006) followed a nested approach to debunk the notion that "boys want sex while girls want romance." A representative survey of almost 1,000 students in Toledo, Ohio, currently or recently dating found (among other things) that boys reported less power, less confidence in navigating relationships, and no less emotional attachment than did girls. In-depth interviews with a subset of 100 reinforced the findings and helped explain their source. Boys' lack of confidence, for example, appeared to result in part from prior rejections, themselves a common occurrence in a context where they are traditionally expected to take the initiating role. For their Connected Livers Project, a study of the reciprocal relationship between information and communication technologies and social networks, Wellman et al. (2006) sampled 350 residents of East York. Approximately one-quarter of these respondents was then selected for in-depth interviews, followed by both open and semistructured observations, where researchers watched how participants used the internet to search for health and cultural information. The nested study revealed the manifold ways the internet shaped interpersonal relations among family members, while also belying some

theoretical expectations. For example, the survey uncovered that households reported surprisingly few conflicts as a result of internet or computer use; the ethnographic data provided many reasons why. The head of one household who reported no conflicts in the survey explained in the interview that the two additional computers were purchased to resolve disputes; observation revealed that the family had assembled all three computers at separate desks in the living room. In fact, the observations generally revealed blurry boundaries between work and play spaces within homes, adding context to the respondents' survey answers.

Studies based on nested designs are especially common in randomized control trials in policy research, where an entire team assessing a study is divided into subteams separately responsible for survey or interview components (e.g., Duncan et al. 2007, Briggs et al. 2010; for a review, see DeLuca et al. 2011; also see Greene et al. 1989). In this kind of nested study, usually all participants are surveyed and a subsample is selected at random for in-depth interviews or observation. Probably the largest and most complex study of this kind in recent years has been the multiteam, multimillion-dollar Moving to Opportunity randomized control trial (Katz et al. 2001, Goering & Feins 2003, Briggs et al. 2010, DeLuca & Rosenblatt 2010). The Moving to Opportunity studies were designed to assess whether giving residents of housing projects vouchers to live in nonpoor neighborhoods would improve their conditions. Volunteers, all current recipients of housing project–based assistance in five cities, were randomly given either vouchers to be used in nonpoor neighborhoods, traditional Section 8 vouchers that could be used anywhere, or no vouchers. Although many expected that the first group would experience substantially improved conditions, the results were inconsistent (for reviews, see Goering & Feins 2003, Orr et al. 2003, Briggs et al. 2010). Although the findings and their studies are too numerous to cover here, a notable finding was that, whereas girls saw gains in education and risky behavior, boys did worse in these outcomes. Briggs et al. (2010, p. 41) conducted interviews with a subsample of 122 families and multiple visits with 39 of them. They found that girls' improvement was due in part to the substantially reduced fear of sexual assault associated with their move to low-poverty areas (see also Clampet-Lundquist et al. 2006, Briggs et al. 2008, Popkin 2008).

Non-nested designs. Non-nested studies have been fruitful in cases where obtaining multiple data from the same individual units was impractical, unnecessary, or unhelpful (e.g., Cherlin et al. 2004, Parrado & Flippen 2005, Zuckerman & Sgourev 2006, Shrank 2008, Small 2009b, Fernandez-Mateo 2009, Massey & Sanchez 2010, Schilt 2011). In a study by Lee & Bean (2010) of the impact of immigration on racial identification and intermarriage, nested data collection was impractical, and probably impossible. The authors were concerned that both "demographic-compositional" and "cultural-perceptual" factors shape the socially constructed boundaries among racial groups. To understand the first, they used population data from the U.S. Census; to understand the second, they conducted 82 in-depth interviews with multiracial individuals and interracial couples identified through ethnic restaurants, salons, and other organizations throughout California. The authors found that some of the compositional effects expected by the demographic data—wherein a mere proportional increase in group size may affect intermarriage—did not have the expected consequences, in part because most racial groups, even as they exhibited open attitudes about interracial marriage during interviews, strongly opposed black intermarriage. Their argument would not have been strengthened if the 82 interviews had somehow been drawn from a list of Census respondents; the confidentiality constraints of the Census would probably, in any case, have made it impossible. Nesting would not have improved their study. Non-nested data collection has also been useful in complementary research designs aiming to understand

the totality of a group, community, network, or market, where diverse sources are more informative than multiple data points from the same persons or organizations (e.g., Zuckerman & Sgourev 2006). For example, Cook et al. (2007, p. F588) studied underground gun markets "drawing on interviews with gang members, gun dealers, professional thieves, prostitutes, police, public school security guards and teenagers in the city of Chicago, complemented by results from government surveys of recent arrestees in 22 cities, plus administrative data for suicides, homicides, robberies, arrests and confiscated crime guns." Different data types from different sources contributed to a remarkably comprehensive picture, uncovering, among other things, that transaction costs and markups in the illegal gun market were higher than previously thought. Finally, nonnested designs have been useful when nesting would be contrary or unhelpful to the core objectives of the study. Ferree (2003) hoped to understand how feminists in the United States and Germany framed their activism in response to local cultural environments. To understand the cultural environments, she examined 2,618 articles on abortion from 1970 to 1994 in two major newspapers in each country. To understand the feminists' actions, she naturally would have gained little from sampling a subset of these newspaper articles for qualitative analysis; instead, she interviewed 14 U.S. and 11 German organizations pushing for abortion rights, the organizations' literature, and feminist writings in both contexts. Among other things, she found that, contrary to feminists in the United States, those in Germany claimed that protecting the fetus, a strongly held ideal in the cultural context, required protecting the mother through fair wages, antidiscrimination laws, and state-supported childcare.

Nested versus non-nested designs? The decision whether to conduct a nested study is overwhelmingly determined by the question. If the strength of nesting is the presence of multiple data points per subject, the strength of not nesting data collection probably lies in its flexibility. The prior discussion about the differences in positions on the importance of design when considering the sequence of data collection is applicable to the decision on nesting.

As I have discussed, the mixed data–collection literature in the first decade of the twenty-first century has been active and diverse. Nonetheless, the literature in some respects is still in its infancy. Relatively few of the mixed data–collection studies described make a case that their approach serves the question better than alternative mixed approaches; even fewer cite the methodological literature to justify their approach. For example, for the qualitative portion of their analysis of age-discrimination cases, Roscigno et al. (2007) chose to analyze 120 randomly selected cases in limited fashion rather than, say, 10 substantively selected cases in greater depth. Considering their quantitative analysis had relied on more than 2,000 cases, one could argue that more would have been gained from the qualitative portion by selecting fewer court cases on the basis of the quantitative findings and understanding these carefully selected cases better. Naturally, the authors' approach may provide its own advantages, but without a discussion, it is difficult to tell whether the rationale for mixed data collection was optimal. As I discuss below, failing to justify the particular mixed methods strategy may mask epistemological tensions likely to surface as methodologists from particular perspectives begin to critique and evaluate the assumptions behind mixed data–collection projects. Before that discussion, however, I assess an entirely different set of approaches to mixed methods research in recent years.

TRENDS IN MIXED DATA ANALYSIS

Most researchers have analyzed multiple data sources the way they examine single data sources. When analyzing interview transcripts, ethnographic field notes, or historical texts, researchers have approached the data qualitatively: developed narratives, inferred

meanings, quoted passages at length, and generally avoided numbers. When analyzing survey responses, census tabulations, or large-sample data from administrative records, they have approached the data quantitatively: calculated averages, plotted distributions, estimated coefficients, and modeled formal relationships.

Nevertheless, a different kind of mixed methods study has blossomed in recent years. In this kind of study, which is often based on a single type of data, researchers have mixed methods in the analysis, rather than data collection, stage (see Ragin 1987, 2008; Caracelli & Greene 1993; Sandelowski 2000; Onwuegbuzie et al. 2007; Onwuegbuzie et al. 2009; Sandelowski et al. 2009). Although some of this work has generated controversy, some has coaxed findings out of data in innovative ways. For the discussion that follows, I focus selectively on studies that illustrate these new perspectives. I review studies that use one of two approaches to mixed data analysis: crossover analysis, wherein quantitative techniques are applied to qualitative data or vice versa, and integrative analysis, wherein two or more different analytical approaches or techniques are merged in a single study.

Crossover Analyses

My definition of crossover analyses requires some clarification. Other reviews of mixed methods research have referred to these as studies that either "quantitize" qualitative data or "qualitize" quantitative data (Onwuegbuzie et al. 2007, Sandelowski et al. 2009, Maxwell 2010). Unfortunately, that dichotomy does little to narrow the literature because even conventional qualitative analyses often rely on at least some quantitative procedures, and vice versa. For example, many ethnographers, after coding their data, analyze the codes quantitatively, converting the codes into tables to identify high-frequency items or to estimate intercoder reliability. If this constitutes "quantitizing" qualitative data (and it certainly seems to), then the idea of quantitizing data does not identify a distinct approach to analyzing data. Instead, by crossover analyses, I refer specifically to studies in which qualitative data are analyzed primarily through formal, mathematical, or statistical techniques or those in which quantitative data are analyzed primarily through narrative techniques.

Crossover research is not new, as evidenced by long-standing traditions in content analysis and quantitative anthropology (e.g., see the now defunct *Journal of Quantitative Anthropology*, 1989–1996; **http://www.quantitativeanthropology.org**). However, two recent trends have accelerated the prevalence of some kinds of crossover studies. First, continuing advances in computing power and the proliferation of easy-to-use analysis software have vastly expanded the range of either formal or statistical analyses of narrative textual data such as ethnographic field notes, personal life stories, or historical documents (see Carley 1993; Franzosi 1994; Franzosi & Mohr 1997; Mohr 1998; Raftery 2001, pp. 28–30; Bazeley 2003). Second, across the social sciences, frustration with the limits of quantitative methods that are limited to making claims about statistical associations has revived interest in understanding causal processes and mechanisms (Hedström & Swedberg 1989; Brady & Collier 2004; Morgan & Winship 2007, pp. 219–42; Gross 2009; Hedström & Ylikoski 2010; Mahoney 2010). This interest has inspired comparatively fewer but still creative attempts to analyze large samples or numeric data qualitatively (Singer et al. 1998; see also Bazeley 2003; Onwuegbuzie et al. 2007, pp. 9–10). The more notable of these sets of developments are discussed below.

Network analyses of narrative textual data.

Social network analysts generally conceive of relations as sets of nodes and the ties between them, and they seek to understand the underlying structure of relations in these systems of nodes and ties (Wasserman & Faust 1994). Many researchers have begun to use network methods to study the structure of connections in narrative textual data (Bearman et al. 1999,

Pentland & Feldman 2007, Smith 2007; for earlier reviews, see Franzosi & Mohr 1997, Mohr 1998). For example, Bearman & Stovel (2000) used data from personal life stories to understand the identity of Nazi Germans of the 1930s. To do so, they coded the stories into networks: "[E]very discrete element within the narrative" (Bearman & Stovel 2000, p. 76) was a node, and every explicit connection was a tie. Using formal network analysis methods, they uncovered that narratives for being a Nazi and those for becoming one differed in their structural features: Among other things, the narratives describing becoming a Nazi were structurally denser and less disjointed than those describing being one, suggesting that, with respect to their identity, the state of being and the act of becoming may be understood differently by actors. Similarly, Quinlan & Quinlan (2010) used formal network analysis to study the difference between a single victim's narrative of her sexual assault and the institutional narrative produced by the forensic laboratory that handled the case. (In this particular case, the victim successfully sued the police force of a large Canadian city for mishandling her rape case, bringing attention, according to the authors, to systematic discrimination in the handling of rape cases.) The authors coded the two narratives into networks and conducted quantitative network analysis, following a procedure similar to that of Bearman and Stovel. Among other things, they found that nodes in the institutional narrative were less interconnected than those in the victim's personal narrative, and that, in the institutional narrative, the node corresponding to the victim's identity had the largest number of ties, which suggested to the authors that, consistent with feminist theories, "the rape victim's identity is central within the construction of the legal representations of rape as it works to either validate or discredit her claims of sexual assault" (Quinlan & Quinlan 2010, p. 14). Scholars in this vein believe that network analysis helps to understand the structure of narratives more easily than is possible with traditional interpretive methods.

Sequence analyses of narrative textual data. Sequence analysts assume that the order in which events take place is important, and they aim to uncover either regularities in or the underlying structure behind the ordering of events (see Abbott 1995). Popular techniques for sequence analysis include event structure analysis and optimal matching. The many available techniques for sequence analysis have been applied to topics as varied as the development of careers (Aisenbrey & Fasang 2010, Brzinsky-Fay & Kohler 2010), the events characterizing social movements (Brown 2000, Brueggeman & Brown 2003), and the patterns underlying lynchings (Stovel 2001). These models have also been used to analyze qualitative texts such as historical documents or ethnographic notes (Heise 1989, Corsaro & Heise 1990, Isaac et al. 1994, Griffin 1993). Transforming narratives into formal sequences of events with multiple causal pathways has helped researchers to distinguish significant from nonsignificant events, identify turning points, and uncover other aspects of narratives that are difficult to detect with conventional qualitative techniques. For example, Richardson (2009) studied the confrontation between union activists and local law officials in Everett, Washington, in the 1916 event known as the Everett Massacre. The event took place one day in November when a ferry carrying 250 union activists tried to dock in Everett, only to be met by the sheriff and 200 deputy citizens. Words were exchanged, a shot was fired, and eventually at least seven lost their lives. However, a number of events in the preceding months led to the confrontation. Richardson traced the pathways connecting every major related event over the previous six months on the basis of four texts providing full narratives of the circumstances preceding the Everett Massacre. He uncovered that the historically significant starting point was the opening of a union hall in Everett in August that institutionalized the union as a threat: This event, more than any others, unleashed the sequence of events that eventually lead to the massacre. Furthermore, he found that the crucial culmination point

was not, in fact, the November massacre, but a September ordinance passed under pressure of local mill owners limiting free speech. After the ordinance, Richardson discovered, the violent confrontation was all but inevitable given the sequence of events that preceded and followed it.

Similarly, Uehara (2001) used event structure analysis to understand how Cambodian Americans sought help when needed. She analyzed a 25-page multifaceted narrative text assembled from in-depth interviews with a single U.S. family that had escaped war-torn Cambodia in 1975. After the wife learned that her family members back home had been murdered by the Khmer Rouge, she entered an extended depression that affected family and social relations until her eventual recovery. Uehara uncovered the formal structure of the narrative using software that forces the analyst to answer questions about the sequence of events and whether they were causally related. The formal representation of the events revealed to Uehara that the critical moment in the wife's improvement was their monk's advice for the husband to adopt the supportive roles formerly played by the wife's family. The fact that this event, above all others, turned out to be the crucial turning point revealed to Uehara how important relation-specific roles were to the Cambodians' understanding of social support. Event structure analysts have found that the structural cores of complex, detail-rich narratives are much easier to uncover when represented formally.

Other quantitative analyses of narrative textual data. Other recent quantitative analyses of textual data can be seen as extensions of classic content analysis that adopt perspectives from linguistics (see Bazeley 2003). Rather than the traditional statistical counts, where researchers examine the number of times a word or phrase is used, researchers have mapped the semantic relationships among the elements of a text, based on coding schemes that maintain the basic relationships among words in clauses or sentences (Carley 1993; Roberts 1997, 2000; for contrast, see Fiss & Hirsch 2005). For example, Franzosi (1994, 2004) has proposed a Subject/Action/Object semantic grammar to use as a coding scheme for texts in which agents are performing actions. This kind of work is likely to gain from advances in computation and natural language processing, though sociology awaits the importation of these techniques (Jurafsky & Martin 2008).

Narrative analyses of large-*n* survey data. Although most of the innovation in crossover mixed analysis has come from the formalization of narrative text data, a team of researchers has applied qualitative narrative techniques to the analysis of survey data. Rather than converting narrative life histories into quantifiable data, Singer et al. (1998) converted longitudinal survey data into narrative life histories. The authors used survey responses from the Wisconsin Longitudinal Study to identify the life-history pathways associated with four different levels of mental health. They began by narrowing the focus to a set of variables (approximately 250) expected to affect mental health, such as employment history, marriage or divorce, and death of a family member. They then sampled a handful of respondents from each mental health category (depressed, vulnerable, resilient, healthy) and reconstructed full, extended narratives of the life of each individual on the basis of answers to the questions in each wave of the survey. The reconstructed narratives contained elements such as the following: "The respondent is one of nine children.... Her mother had eight years of schooling and did not work when the respondent was in high school.... In her senior year in high school, she did not plan to go to college and said her parents did not care whether she attended.... She married in 1959 and in 1975 was still married..." (Singer et al. 1998, pp. 14–15). These narratives served as the foundation to analyze a new, slightly larger sample ($n = 10$) from each mental health category and to focus on the smaller set of factors that seemed to categorize the pathways of individuals in the group. The authors then turned

to a simple Boolean system to categorize each individual based on the presence or absence of these factors and to identify the proportions of respondents with each possible combination of core life-history stages or traits within each mental health category. The procedure uncovered the presence of a clearly definable set of respondents categorized as "resilient," those whose current well-being was higher than expected given their history of depression. The procedure also identified the possible pathways through which women attained resilience. For example, among the large set of women who had experienced depression due to alcohol-related abuse while growing up, the presence of strong relationships during early adulthood or the experience of upward mobility during the midlife period were strongly associated with resilience (Singer et al. 1998, p. 28).

Regression-based analyses of small-*n* or narrative text data. One of the most common crossover practices has been analyzing interview transcripts, ethnographic field notes, and historical narrative data using conventional techniques for examining survey data (e.g., McFarland 2001, Dixon et al. 2004, Phillips & Cooney 2005). As early as the mid-1970s, Campbell (1976), while taking back his earlier argument that "one-shot case studies" had "almost no scientific value" (Campbell & Stanley 1963, p. 6), argued that researchers doing single-case ethnographic studies should adopt versions of standard statistical techniques, such as thinking in terms of one-tailed versus two-tailed tests. More recently, King et al. (1994) made a similar argument in much more detail, proposing that the collection and analysis of "qualitative" data, when aiming for either descriptive or causal inference, should be guided by the core concerns of bias, efficiency, and consistency. King et al. (1994) sparked a major controversy, with critics complaining, among other things, that the authors' proposals are inappropriate for many research objectives (see Brady & Collier 2004, Bennett & Elman 2006, Lamont & White 2008, Small 2009a, Mahoney 2010).

Regardless, many researchers have been analyzing interview, ethnographic, or other small-sample data by borrowing models from standard survey analysis, with applications ranging from calculating simple frequency statistics to running statistical regressions. A sampling of these studies provides a sense of the many variations on this approach. In their study of the relationship between history of violence and marital behavior, Cherlin et al. (2004) treated their interview data just as they did their survey data, computing frequency statistics for the interviews to parallel those in the survey. Poehlmann et al. (2008) used data from in-depth interviews with 92 incarcerated mothers to examine what factors predicted a sense of continuity in the children's living arrangements after the mothers' incarceration. The open-ended interviews included structured portions that the authors used to generate variables and run logistic regressions. They found, among other things, that children were more likely to be separated from siblings when there were more of them and that their caregiver was likely to be more stable when it was the father. In their study of differences in how black and white juvenile offenders are evaluated by courts, Bridges & Steen (1998) coded 233 of the open-ended, 2- to 12-page narrative reports produced by probation officers for juvenile court cases. The authors coded for whether probation officers attributed criminal activity to the offenders' personality or to external factors, for the officers' assessment of the threat that the offender would commit another crime, and for other issues. Running statistical regressions, the authors found that black and white offenders were portrayed differently: Delinquency by black offenders was more likely to be portrayed as deriving from personality, whereas that by white offenders was more likely to be portrayed as deriving from the environment. Furthermore, the officers' assessment of the risk that the offender would commit another crime tended to depend more on a negative assessment of the offender's personality than on criminal history. (The authors also analyzed the narrative texts

through conventional interpretive methods.) McFarland (2001) conducted participant observation in classrooms in two schools and recorded instances of student disruption or resistance. He then coded his field note data and used regressions to predict when disruptions would occur in the classroom, uncovering, among other things, that students were more disruptive when they had denser networks and, as the year progressed, when they were taking math courses. Finally, Roscigno & Hodson (2004) and Dixon et al. (2004) applied regression-based methods to ethnographic reports from hundreds of published case studies of organizations. They created variables about work and organizational conditions from the ethnographies, and treated the studies collectively as a sample to identify the configurations of conditions that predicted strikes and other forms of worker resistance. All these studies have reported findings based on field note, transcript, or documentary textual data that would be difficult to uncover without quantitative aggregation and statistical inference.

For all their creativity, crossover analyses also leave much potential for misapplication, and even for meaningless findings, if researchers have not exercised care (Small 2009a). At a minimum, the application of techniques should not be fundamentally contrary to the epistemological principles from which they are derived or to the technical problems for which they were intended. For example, conventional social network analysis assumes that relations may be represented as distinct nodes and the ties between them. When applied to narrative texts, there must be convincing reason to believe that particular sets of words or statements constitute single nodes, rather than two or three separate ones; otherwise, all analyses, no matter how sophisticated, rest on ontologically shaky grounds. Similarly, calculating frequency statistics for a sample of respondents assumes that the given variable in exactly the same form is available for each respondent. When applied to open-ended, conversational interviews that ranged in substance from respondent to respondent, there must be convincing reason to believe that different conversational snippets from each interview can somehow be categorized reliably as values of a single variable, which includes knowing, for example, that framing effects, question wording, or question ordering played no role in the differences in responses (a tall order); otherwise, the frequency statistics are substantively meaningless. With a bit of reflection, similar potentially serious problems can be seen in the application of regression, sequencing, and many other techniques for types of data other than those for which they were designed.

Unfortunately, researchers have often not reported enough information about their coding practices to know whether these issues are a problem. For example, in their study of the sexual assault narratives, Quinlan & Quinlan (2010, p. 133) reported that they "took the sentences and phrases" that "seem to be most representative of the experience that is being explored" and "divided them into themes," which became the nodes in the network. But their discussion does not provide sufficient information to determine that a separate coder would have arrived at the same understanding of what statements seemed representative or what sets of words should be categorized as nodes. (To their credit, the authors posted part of the victim's unedited narrative.) If different coders would have produced different networks, the reported analysis would be unreliable. Unless researchers begin addressing these issues, the work will have difficulty convincing skeptics.

Integrative Analyses

Several studies in recent years have integrated multiple analytical techniques when analyzing a single data source (e.g., Emerson et al. 2001, Edelman et al. 2001, Johnston & Baumann 2007; see Onwuegbuzie et al. 2009). Some of these studies combined two different analytical approaches. The idea behind these analyses has been inherently complementary: to use the analytical leverage generated by different analytical perspectives to yield a more comprehensive picture of a problem than is possible from one perspective alone. Several of these analyses

have been creative; a sampling of them illustrates the range of studies. Isaac et al. (1994) combined time-series analysis with event-structure analysis to explain the rapid expansion of Aid to Families with Dependent Children (AFDC) during the late 1960s. They found that the relationship between insurgency among the poor and the growth of AFDC was highest in 1968 and that two key turning points were the death of Martin Luther King and the demise of the Poor People's Campaign. Gibson (2005) combined social network analysis with conversational analysis to understand the patterns of social interaction among groups of managers. He found that, during meetings, the shifts in and sequencing of conversations—who interrupted whom and in what order—depended on the network of relations between participants, particularly on the subordinate-superior relation and on the friendship or coworker relation. Mische (2008) combined social network analysis with interpretive analysis to examine the talk and actions of the young activists in Brazil with whom she conducted participant observation. She found, among other things, that the activists' self-perception, activism, and partisanship were affected by the fact that they operated at the intersection of multiple organizations.

A small number of researchers have integrated analyses by creating altogether new analytical techniques. Without a doubt, the most successful of these has been Ragin's (1987, 2000, 2008) qualitative comparative analysis (QCA), a set of Boolean-based analysis tools designed to combine the strengths while transcending the limits of case-based and variable-based analysis. The core ideas behind QCA are to treat each case as a particular configuration of traits and to identify the sets of traits necessary for a given outcome to occur. For example, to understand the causes of ethnic political mobilization, one would select all cases where the theoretically relevant mobilization may occur; identify predictors, such as size of growing minority or democratic government, based on theory; and determine which combinations of present or absent predictors are required for mobilization to occur. There have been numerous applications and reviews of both QCA and fuzzy-set QCA, where cases are allowed to vary in their degree of membership in a set (e.g., Dixon et al. 2004, Bail 2008; see Ragin 2000, 2008). In addition, recent years have seen the development of several extensions, such as multivalue QCA, where variables need not be dichotomous (see Rihoux 2006).

ONGOING CONCERNS IN MIXED METHODS PRACTICE

Our discussion so far makes clear that researchers interested in mixed methods today have a diverse set of models at their disposal. At the same time, they will likely have to face important issues endemic to the mixed methods enterprise. I conclude by discussing two of the thorniest among these issues, commensurability and specialization (see also Onwuegbuzie 2007).

Commensurability

The problem of commensurability derives from the relationship between methodological techniques and the epistemological perspectives that inform them. Some authors have argued that combining quantitative and qualitative perspectives is not possible without contradiction, because different methods reflect different epistemologies, which, by definition, hold different assumptions about the nature of truth (Guba & Lincoln 1982, Lincoln & Guba 2000). For example, Smith & Heshusius (1986) contended that, whereas quantitative research adopts a positivist perspective, believes in the existence of an independent social reality, and seeks to discover objective truth, qualitative research adopts a hermeneutic perspective, questions the existence of a (knowable) social reality, and seeks to interpret subjective experience. Their respective logics are not compatible, critics argue, to the extent that one cannot simultaneously be a positivist and an interpretivist.

There are several problems with these arguments (see Reichardt & Cook 1979, p. 20; Bryman 1984; Guba & Lincoln 2005). Among

other issues, they overstate how closely tied epistemological perspective and everyday practice are. For example, many "positivists" are ethnographers. And many "quantitative researchers" disagree over fundamental epistemological issues, such as the superiority of Bayesian or frequentist inference. Nevertheless, there are two reasons, one philosophical and one practical, to take seriously the overall critique.

First, some analytical approaches are, in fact, incommensurable, because their techniques are tightly coupled with conflicting epistemological perspectives. Consider a study hoping to explain why people make their particular choices when purchasing clothes. It is difficult to imagine a design that managed to combine effectively the methods of a neoclassical economist with those of an ethnomethodologist. The former assumes that (all) actors make purchasing decisions with an aim to maximize utility; that the choice that maximizes utility can be derived deductively; and that testing those expectations against data requires a large sample, an experiment, or a quasi-experimental condition. The latter assumes that decisions occur only in a context in time and space (i.e., they are indexical); that, therefore, they can be discovered only in the field, in the presence of given actors (purchasers) in a given context (clothing stores, etc.); and that one's discovery cannot be assumed to reflect the likely decisions of other actors in other contexts (Garfinkel 1984). A researcher cannot simultaneously adopt both sets of assumptions without contradiction. Researchers will likely face commensurability issues to the extent they attempt to integrate two or more perspectives that exhibit this kind of tight coupling, such as ethnomethodology or QCA. As methodological perspectives become more self-reflexive, integrative mixed analysis will likely become increasingly challenging.

Second, researchers who choose to ignore the commensurability critique may well suffer the consequences in practice. Consider a mixed data–collection study in which a team of demographers and interviewers is studying the effects of an experimental high school on students' test scores. Students are admitted by lottery in the ninth grade, and the researchers survey all applicants (admitted or not) over four years to determine the causal impact of the curriculum. To help uncover the mechanisms underlying that causal relationship, the researchers agree on conducting a complementary interview study. Their budget allows for up to 40 careful, in-depth interviews. What approach to selecting interview respondents would yield the best complementary data?

Regardless of the researchers' indifference to epistemological matters, any answer will betray an epistemological perspective with likely strong assumptions about the principles that should guide selection. Consider some possibilities: The demographer proposes sampling 20 admitted and 20 nonadmitted students at random, to ensure representativeness (see, e.g., Duncan 2008). The interviewer argues that, for such a small sample, representativeness is meaningless and, in any case, not the objective for which a small interview study is suited; instead, she proposes focusing on 40 students who demonstrated substantial gains (see, e.g., Weiss 1994). A second interviewer argues that the true complement to a study of causal effects is a study of the processes that gave rise to them, which requires tracing changes as they occur; he proposes, instead, interviewing 10 students at the start of the study and again once a year for the subsequent three years (see e.g., Hedström & Ylikoski 2010). All three approaches can find support in a methodological literature in sociology.

Furthermore, each approach suffers from what is considered a fundamental flaw, not just a limitation, from an alternative methodological perspective: The first option is unable to "trace processes" as they occur; the second "selects on the dependent variable"; the third relies on an exceedingly "small-*n*" (see George & Bennett 2005, King et al. 1994, and Lieberson 1991, respectively). This review is not the place to assess the merits of each critique. The point is that each flaw is perceived as such for strongly established epistemological reasons, and no universally agreed-upon criterion currently exists in

sociology that can adjudicate among them (not even a pragmatist orientation). If researchers in the team come from different traditions, agreement will be difficult. Moreover, if the work is presented before the wrong audience, any agreed-upon decision faces substantial risk of rejection.

Specialization

A related problem stems from the fact that the social sciences will likely continue their relentless specialization, including methodological specialization. This trend has several practical consequences. First, it will increase the difficulties the mixed methods researcher faces in remaining methodologically up to date. The jack-of-all-trades methodologist is a quickly dying archetype. It is not uncommon to find, e.g., experts on causal inference who declare themselves unable to evaluate innovations in social network analysis or in multiple correspondence analysis. By extension, it will be increasingly difficult for mixed methods researchers to produce works at the cutting edge of the respective methods employed. Second, because of continuing specialization and the basic nature of the review process, mixed methods researchers will increasingly face reviewers who are better experts than the authors on some analytical technique employed in the study. This predicament will either push the work to the margins of central disciplines or increase the number of studies conducted by teams with complementary specialties (e.g., Clampet-Lundquist et al. 2006). Third, increased specialization will heighten the challenges of translation (Small 2009a). Probably the most important skill for the mixed methods researcher today will be the ability to write and think across not only methodological techniques but also epistemological perspectives. Within sociology, many concepts that are fundamental and taken for granted in one methodological tradition are entirely alien in others. Examples are "back-door path," "axial coding," and "structural equivalence" (see Pearl 2009, pp. 79–81; Strauss & Corbin 1990, pp. 96–115; Lorrain & White 1971, respectively). Translation involves not merely defining such terms and their significance but also the more difficult task of communicating convincingly core assumptions about quality, reliability, validity, and the aims of research inquiry. Many have written of the challenges to discourse that arise when parties differ in their assumptions about the foundations of knowledge or rules of deliberation (e.g., Bourdieu 1977). Because methodologists work within increasingly specialized areas of expertise, it will be difficult for evaluators with strong and continuously reinforced beliefs about foundational issues—such as the importance of statistical generalizability, random assignment, field immersion without preconceptions, or direct observation—to entertain the radically different alternatives that a mixed methods project may involve.

CONCLUSION

Dissatisfaction breeds creativity. Empirical researchers have been unhappy with the natural limits of conventional methods, including experiments that do not uncover mechanisms, case studies that do not speak to distributions, interpretive techniques that lack formalization, and statistical techniques that lack contextualization. Their efforts have given rise to a large, diverse literature that combines or integrates either data collection techniques or analytical approaches from multiple perspectives. The literature, still in its infancy in many respects, will likely need to probe methodological questions further as it seeks greater dialogue with traditional methodological perspectives, a task that will require overcoming the challenges presented by commensurability and specialization. In a sense, the challenges of mixed methods research reflect those of sociology writ large, a discipline whose core methodological pluralism has produced, over its history, periods of conflict and of cooperation, but few of lasting resolution (e.g., Znaniecki 1945, Collins 1984). Mixed methods projects provide both the challenge and opportunity for

researchers to resolve some of the ambiguities that result from pluralism, to take reasoned positions, for example, on the proper way to approach 40 interviews to follow up a survey. Whether researchers will choose to do so remains to be seen.

DISCLOSURE STATEMENT

The author is not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

ACKNOWLEDGMENTS

I thank Scott Allard, Karen Cook, Al Hunter, Ed Laumann, Stefanie De Luca, Jamila Michener, Tony Onwuegbuzie, Sabrina Placeres, and Kristen Schilt for their comments on the paper. I also thank the University of Chicago for generous research support.

LITERATURE CITED

Abbott A. 1995. Sequence analysis: new methods for old ideas. *Annu. Rev. Sociol.* 21:93–113

Aisenbrey S, Fasang AE. 2010. New life for old ideas: the "second wave" of sequence analysis bringing the "course" back into the life course. *Sociol. Methods Res.* 38:420–62

Annechino R, Antin TMJ, Lee JP. 2010. Bridging the qualitative-quantitative software divide. *Field Methods* 22(2):115–24

Axinn WG, Pearce LD. 2006. *Mixed Method Data Collection Strategies*. Cambridge, UK: Cambridge Univ. Press

Bail CA. 2008. The configuration of symbolic boundaries against immigrants in Europe. *Am. Sociol. Rev.* 73(1):37–59

Barnett WP, Woywode M. 2004. From Red Vienna to the Anschluss: ideological competition among Vietnamese newspapers during the rise of national socialism. *Am. J. Sociol.* 109(6):1452–99

Bazeley P. 2003. Computerized data analysis for mixed methods research. See Tashakkori & Teddlie 2003, pp. 385–422

Bearman PS, Faris R, Moody J. 1999. Blocking the future: new solutions for old problems in historical social science. *Soc. Sci. Hist.* 23(4):501–33

Bearman PS, Stovel K. 2000. Becoming a Nazi: a model for narrative networks. *Poetics* 27(2):69–90

Becker H. 2009. How to find out how to do qualitative research. *Int. J. Commun.* 3:545–53

Becker H, Geer B. 1957. Participant observation and in-depth interviewing. *Hum. Organ.* 16:28–32

Bennett A, Elman C. 2006. Qualitative research: recent developments in case study methods. *Annu. Rev. Polit. Sci.* 9:455–76

Bennett T, Savage M, Silva E, Warde A, Gayo-Cal M, Wright D. 2009. *Culture, Class, Distinction*. London: Routledge

Bernard RH. 2002. *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Walnut Creek, CA: Altamira

Blatchford P, Moriarty V, Edmonds S, Martin C. 2002. Relationships between class size and teaching: a multimethod analysis of English infant schools. *Am. Educ. Res. J.* 39(1):101–32

Bollen KA, Paxton P. 1998. Detection and determinants of bias in subjective measures. *Am. Sociol. Rev.* 63(3):465–78

Bourdieu P. 1977. *Outline of a Theory of Practice*. Cambridge, UK: Cambridge Univ. Press

Brady HE, Collier D, eds. 2004. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*. Lanham, MD: Rowan & Littlefield

Brewer J, Hunter A. 1989. *Multimethod Research: A Synthesis of Styles*. Newbury Park, CA: Sage

Brewer J, Hunter A. 2006. *Foundations of Multimethod Research: Synthesizing Styles*. Thousand Oaks, CA: Sage

Bridges GS, Steen S. 1998. Racial disparities in official assessments of juvenile offenders: attributional stereotypes as mediating mechanisms. *Am. Sociol. Rev.* 63(4):554–70
Briggs XS, Ferryman KS, Popkin SJ, Rendon M. 2008. Why did the moving to opportunity experiment not get young people into better schools? *Housing Policy Debate* 19(1):53–91
Briggs XS, Popkin SJ, Goering J. 2010. *Moving to Opportunity: The Story of an American Experiment to Fight Ghetto Poverty*. New York: Oxford Univ. Press
Brown C. 2000. The role of employers in split labor markets: an event-structure analysis of racial conflict and AFL organizing, 1917–1919. *Soc. Forces* 79(2):653–81
Brueggemann J, Brown C. 2003. The decline of industrial unionism in the meatpacking industry: event-structure analyses of labor unrest, 1946–1987. *Work Occup.* 30(3):327–60
Bryman A. 1984. The debate about quantitative and qualitative research: a question of method or epistemology? *Br. J. Sociol.* 35(1):75–92
Bryman A. 1988. *Quantity and Quality in Social Research*. London: Unwin Hyman
Brzinksy-Fay C, Kohler U. 2010. New developments in sequence analysis. *Sociol. Methods Res.* 38(3):359–64
Campbell DT. 1976. "Degrees of freedom" and the case study. In *Qualitative and Quantitative Methods in Evaluation Research*, ed. TD Cook, CS Reichardt, pp. 49–67. Beverly Hills, CA: Sage
Campbell DT, Fiske DT. 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychol. Bull.* 56(2):81–105
Campbell DT, Stanley JC. 1963. *Experimental and Quasi-Experimental Designs for Research*. Boston: Houghton Mifflin
Caracelli VJ, Greene JC. 1993. Data analysis strategies for mixed method evaluation designs. *Educ. Eval. Policy Anal.* 15(2):195–207
Carley K. 1993. Coding choices for textual analysis: a comparison of content analysis and map analysis. *Sociol. Methodol.* 23:75–126
Cherlin AJ, Burton LM, Hurt TR, Purvin DM. 2004. The influence of physical and sexual abuse on marriage and cohabitation. *Am. Sociol. Rev.* 69(6):768–89
Clampet-Lundquist S, Edin K, Kling JR, Duncan G. 2006. *Moving at-risk teenagers out of high-risk neighborhoods: why girls fare better than boys*. Work. Pap. 509, Indust. Relations Sect., Princeton Univ.
Collins R. 1984. Statistics versus words. *Sociol. Theory* 2:329–62
Cook PJ, Ludwig J, Venkatesh S, Braga AA. 2007. Underground gun markets. *Econ. J.* 117:F588–618
Cook TD, Reichardt CS. 1979. *Qualitative and Quantitative Methods in Evaluation Research*. Beverly Hills, CA: Sage
Correll SJ, Benard S, Paik I. 2007. Getting a job: Is there a motherhood penalty? *Am. J. Sociol.* 112(5):1297–338
Corsaro WA, Heise DR. 1990. Event structure models from ethnographic data. *Soc. Methodol.* 20:1–57
Creswell JW, Plano Clark VL. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage
Creswell JW, Plano Clark VL, Gutmann ML, Hanson WE. 2003. See Tashakkori & Teddlie 2003, pp. 209–40
Dellinger AB, Leech NL. 2007. Toward a unified validation framework in mixed methods research. *J. Mixed Methods Res.* 1:309–32
DeLuca S, Duncan GJ, Keels M, Mendenhall R. 2011. The notable and the null: using mixed methods to understand the diverse impacts of residential mobility programs. In *Neighbourhood Effects Research: New Perspectives*, ed. M van Ham, D Manley, N Bailey, L Simpson, D McLennan. Springer: Dordrecht. In press
DeLuca S, Rosenblatt P. 2010. Does moving to better neighborhoods lead to better schooling opportunities? Parental school choice in an experimental housing voucher program. *Teachers Coll. Rec.* 112(5):1441–89
Denscombe M. 2008. Communities of practice: a research paradigm for the mixed methods approach. *J. Mixed Methods Res.* 2:270–83
Dixon M, Roscigno VJ, Hodson R. 2004. Unions, solidarity, and striking. *Sociol. Forces* 83(1):3–33
Duncan GJ. 2008. When to promote, and when to avoid, a population perspective. *Demography* 45(4):763–84
Duncan GJ, Huston AC, Weisner TS. 2007. *Higher Ground: New Hope for the Working Poor and their Children*. New York: Russell Sage Found.
Emerson MO, Yancey G, Chai KJ. 2001. Does race matter in residential segregation? Exploring the preferences of white Americans. *Am. Sociol. Rev.* 66:922–35

Edelman LB, Fuller SR, Mara-Drita I. 2001. Diversity rhetoric and the managerialization of law. *Am. J. Sociol.* 106(6):1589–641
Engel M. 2007. Mixing methods: reliability and validity across quantitative and qualitative measures of relationship quality. See England & Edin 2007, pp. 255–76
England P, Edin K. 2007. *Unmarried Couples with Children*. New York: Russell Sage Found.
Feilzer MY. 2010. Doing mixed methods research pragmatically: implications for the rediscovery of pragmatism as a research paradigm. *J. Mixed Methods Res.* 4:6–16
Fernandez RM. 2001. Skill-biased technological change and wage inequality: evidence from a plant retooling. *Am. J. Sociol.* 107(2):273–320
Fernandez-Mateo I. 2007. Who pays the price of brokerage? Transferring constraint through price setting in the staffing sector. *Am. Sociol. Rev.* 72(2):291–317
Fernandez-Mateo I. 2009. Gender disadvantage in contract employment. *Am. J. Sociol.* 114(4):871–923
Ferree MM. 2003. Resonance and radicalism: feminist framing in the abortion debates of the United States and Germany. *Am. J. Sociol.* 109(2):304–44
Fine GA, Elsbach KD. 2000. Ethnography and experiment in social psychological theory building: tactics for integrating qualitative field data with quantitative lab data. *J. Exp. Soc. Psychol.* 36:51–76
Fiss PC, Hirsch PM. 2005. The discourse of globalization: framing and sensemaking of an emerging concept. *Am. Sociol. Rev.* 70(1):29–52
Franzosi R. 1994. From words to numbers: a set theory framework for the collection, organization, and analysis of narrative data. *Sociol. Methodol.* 24:105–36
Franzosi R. 2004. *From Words to Numbers: Narrative, Data, and Social Science*. Cambridge, UK: Cambridge Univ. Press
Franzosi R, Mohr JW. 1997. New directions in formalization and historical analysis. *Theory Sociol.* 26:1330–60
Garfinkel H. 1984. *Studies in Ethnomethodology*. Cambridge, UK: Polity
George AL, Bennett A. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press
Gibson DR. 2005. Taking turns and talking ties: networks and conversational interaction. *Am. J. Sociol.* 110(6):1561–97
Gieryn T. 1983. Boundary-work and the demarcation of science from non-science: strains and interests in professional ideologies of scientists. *Am. Sociol. Rev.* 48:781–95
Giordano PC, Longmore MA, Manning WD. 2006. Gender and the meanings of adolescent romantic relationships: a focus on boys. *Am. Sociol. Rev.* 71:260–87
Glaser BG, Strauss AL. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine
Goering J. 2003. Comments on future research and housing policy. See Goering & Feins 2003, pp. 383–407
Goering J, Feins JD. 2003. *Choosing a Better Life? Evaluating the Moving to Opportunity Social Experiment*. Washington, DC: Urban Inst. Press
Greene JC. 2007. *Mixed Methods in Social Inquiry*. San Francisco: Jossey-Bass
Greene JC. 2008. Is mixed methods inquiry a distinctive methodology? *J. Mixed Methods Res.* 2(1):7–22
Greene JC, Caracelli VJ, Graham WF. 1989. Toward a conceptual framework for mixed method evaluation designs. *Educ. Eval. Policy Anal.* 11(3):255–74
Griffin LJ. 1993. Narrative, event-structure analysis, and causal interpretation in historical sociology. *Am. J. Sociol.* 98(5):1094–133
Griffin L, Ragin CC. 1994. Some observations on formal methods of qualitative analysis. *Sociol. Methods Res.* 23:4–21
Gross N. 2009. A pragmatist theory of social mechanisms. *Am. Sociol. Rev.* 74:358–79
Guba EG, Lincoln YS. 1982. Epistemological and methodological bases of naturalistic inquiry. *Educ. Technol. Res. Dev.* 30(4):233–52
Guba EG, Lincoln YS. 2005. Paradigmatic controversies, contradictions, and emerging confluences. In *The Sage Handbook of Qualitative Research*, ed. NK Denzin, YS Lincoln, pp. 191–215. Thousand Oaks, CA: Sage. 3rd ed.
Harding DJ. 2009. Violence, older peers, and the socialization of adolescent boys in disadvantaged neighborhoods. *Am. Sociol. Rev.* 74(3):445–64

Harding DJ. 2010. *Living the Drama: Community, Conflict, and Culture Among Inner-City Boys*. Chicago: Univ. Chicago Press
Hedström P, Swedberg R, eds. 1989. *Social Mechanisms: An Analytical Approach to Social Theory*. New York: Cambridge Univ. Press
Hedström P, Ylikoski P. 2010. Causal mechanisms in the social sciences. *Annu. Rev. Sociol.* 36:49–67
Heise DR. 1989. Modeling event structures. *J. Math. Sociol.* 14(1989):139–69
Isaac LW, Street DA, Knapp SJ. 1994. Analyzing historical contingency with formal methods: the case of the "relief explosion" of 1968. *Sociol. Methods Res.* 23(1):114–41
Jick TT. 1979. Mixing qualitative and quantitative methods: triangulation in action. *Admin. Sci. Q.* 24(4):602–11
Johnson RB, Onwuegbuzie AJ. 2004. Mixed methods: a research paradigm whose time has come. *Educ. Res.* 33(7):14–26
Johnson RB, Turner LA. 2003. Data collection strategies in mixed methods research. See Tashakkori & Teddlie 2003, pp. 297–320
Johnston J, Baumann S. 2007. Democracy versus distinction: a study of omnivorousness in gourmet food writing. *Am. J. Sociol.* 113(5):165–204
Jurafsky D, Martin JH. 2008. *Speech and Language Processing: An Introduction to Natural Language Processing, Computational Linguistics, and Speech Recognition*. Upper Saddle River, NJ: Pearson Educ. 2nd ed.
Kadushin C, Hecht S, Sasson T, Saxe L. 2008. Triangulation and mixed methods designs: practicing what we preach in the evaluation of an Israel experience program. *Field Methods* 20(1):46–65
Kasinitz P, Mollenkopf JH, Waters MC, Holdaway J. 2008. *Inheriting the City: The Children of Immigrants Come of Age*. New York: Russell Sage Found.
Katz LF, Kling JR, Liebman JB. 2001. Moving to opportunity in Boston. Early results of a randomized mobility experiment. *Q. J. Econ.* 116(2):607–54
King G, Kehoane RO, Verba S. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. New Jersey: Princeton Univ. Press
Klinenberg E. 2002. *Heat Wave: A Social Autopsy of Disaster in Chicago*. Chicago: Univ. Chicago Press
Kurzman C, Leahy E. 2004. Intellectuals and democratization, 1905–1912 and 1989–1996. *Am. J. Sociol.* 109(4):937–86
Lamont M, Molnar V. 2003. The study of boundaries in the social sciences. *Annu. Rev. Sociol.* 28:167–95
Lamont M, White P, eds. 2008. *Workshop on Interdisciplinary Standards for Systematic Qualitative Research*. Washington, DC: Natl. Sci. Found.
Latcheva R. 2011. Cognitive interviewing and factor-analytic techniques: a mixed method approach to validity of survey items measuring national identity. *Qual. Quant.* In press
Lee J, Bean FD. 2010. *The Diversity Paradox: Immigration and the Color Line in Twenty-First Century America*. New York: Russell Sage Found.
Leech NL, Onwuegbuzie AJ. 2009. A typology of mixed methods research designs. *Qual. Quant.* 43:265–75
Lieberman ES. 2005. Nested analysis as a mixed-method strategy for comparative research. *Am. Polit. Sci. Rev.* 99(3):435–52
Lieberson S. 1991. Small N's and big conclusions: an examination of the reasoning in comparative studies based on a small number of cases. *Sociol. Forces* 70(2):307–20
Lincoln YS, Guba EG. 2000. Paradigmatic controversies, contradictions, and emerging confluences. In *Handbook of Qualitative Research, Second Edition*, ed. NK Denzin, YS Lincoln, pp. 163–88. Thousand Oaks, CA: Sage
Lorrain F, White HC. 1971. Structural equivalence of individuals in social networks. *J. Math. Sociol.* 1(1):49–80
Mahoney J. 2010. After KKV: the new methodology of qualitative research. *World Polit.* 62(1):120–47
Massey DS, Sanchez MR. 2010. *Brokered Boundaries: Creating Immigrant Identity in Anti-Immigrant Times*. New York: Russell Sage Found.
Maxcy SJ. 2003. Pragmatic threads in mixed methods research in the social sciences: the search for multiple modes of inquiry and the end of the philosophy of formalism. See Tashakkori & Teddlie 2003, pp. 51–89
Maxwell JA. 2010. Using numbers in qualitative research. *Qual. Inq.* 16(6):475–82
McFarland DA. 2001. Student resistance: how the formal and informal organization of classrooms facilitate everyday forms of student defiance. *Am. J. Sociol.* 107(3):612–78

Miller SI, Gatta JL. 2006. The use of mixed methods models and designs in the human sciences: problems and prospects. *Qual. Quant.* 40:595–610

Mische A. 2008. *Partisan Publics: Communication and Contention across Youth Activist Networks*. Princeton, NJ: Princeton Univ. Press

Mohr JW. 1998. Measuring meaning structures. *Annu. Rev. Sociol.* 24:345–70

Morgan DL. 2007. Paradigms lost and pragmatism regained: methodological implications of combining qualitative and quantitative methods. *J. Mixed Methods Res.* 1(1):48–76

Morgan SL, Winship C. 2007. *Counterfactual Models and Causal Inference: Methods and Principles for Social Research*. New York: Cambridge Univ. Press

Moore MR. 2008. Gendered power relations among women: a study of household decision making in black, lesbian stepfamilies. *Am. Sociol. Rev.* 73:335–56

Morse JM. 1991. Approaches to qualitative-quantitative methodological triangulation. *Nurs. Res.* 40:120–23

Morse JM. 2003. Principles of mixed methods and multimethod research design. See Tashakkori & Teddlie 2003, pp. 189–208

Newman I, Ridenour CS, Newman C, DeMarco GMP. 2003. A typology of research purposes and its relationship to mixed methods. See Tashakkori & Teddlie 2003, pp. 167–88

Obstfeld D. 2005. Social networks, the *tertius iungens* orientation, and involvement in innovation. *Admin. Sci. Q.* 50(1):100–30

Onwuegbuzie AJ. 2007. Mixed methods research in sociology and beyond. In *Encyclopedia of Sociology*, ed. G Ritzer, Vol. VI, pp. 2978–81. Oxford: Blackwell

Onwuegbuzie AJ, Johnson RB, Collins KMT. 2009. Call for mixed analysis: a philosophical framework for combining qualitative and quantitative approaches. *Int. J. Mult. Res. Approaches* 3(2):114–39

Onwuegbuzie AJ, Johnson RB, Collins KMT. 2011. Assessing legitimation in mixed research: a new framework. *Qual. Quant.* In press

Onwuegbuzie AJ, Slate JR, Leech NL, Collins KMT. 2007. Conducting mixed analysis: a general typology. *Int. J. Mult. Res. Approaches* 1:4–17

Orr L, Feins JD, Jacob R, Beecroft E, Sanbonmatsu L, et al. 2003. *Moving to Opportunity Interim Impacts Evaluation*. Washington, DC: Dep. Hous. Urban Dev.

Pager D, Quillian L. 2005. Walking the talk? What employers say versus what they do. *Am. Sociol. Rev.* 70(3):355–80

Paluck EL. 2010. The promising integration of qualitative methods and field experiments. *Ann. Am. Acad. Polit. Soc. Sci.* 628:59–71

Parrado EA, Flippen CA. 2005. Migration and gender among Mexican women. *Am. Sociol. Rev.* 70(4):606–32

Pearce LD. 2002. Integrating survey and ethnographic methods for systematic anomalous case analysis. *Sociol. Methodol.* 32:103–32

Pearl J. 2009. *Causality: Models, Reasoning, and Inference*. Cambridge, UK: Cambridge Univ. Press. 2nd ed.

Pentland BT, Feldman MS. 2007. Narrative networks: patterns of technology and organization. *Organizational Sci.* 18(5):781–95

Phillips S, Cooney M. 2005. Aiding peace, abetting violence: third parties and the management of conflict. *Am. Sociol. Rev.* 70(2):334–54

Plano Clark VL, Garrett AL, Leslie-Pelecky DL. 2010. Applying three strategies for integrating quantitative and qualitative databases in a mixed methods study of a nontraditional graduate education program. *Field Methods* 22(2):154–74

Poehlmann J, Shlafer RJ, Maes E, Hanneman A. 2008. Factors associated with young children's opportunities for maintaining family relationships during maternal incarceration. *Fam. Relat.* 57:267–80

Popkin SJ. 2008. *Commentary: New Findings on the Benefits and Limitations of Assisted Housing Mobility*. Washington, DC: Urban Inst. **http://www.urban.org/publications/901160.html**

Quinlan E, Quinlan A. 2010. Representations of rape: transcending methodological divides. *J. Mixed Methods Res.* 4(2):127–43

Raftery AE. 2001. Statistics in sociology, 1950–2000: a selective review. *Sociol. Methodol.* 31(1):1–45

Ragin CC. 1987. *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. Berkeley: Univ. Calif. Press

Ragin CC. 2000. *Fuzzy-Set Social Science*. Chicago: Univ. Chicago Press
Ragin CC. 2008. *Redesigning Social Inquiry: Fuzzy Sets and Beyond*. Chicago: Univ. Chicago Press
Ragin CC, Nagel J, White P. 2004. *Workshop on Scientific Foundations of Qualitative Research*. Washington, DC: Natl. Sci. Found.
Rallis SF, Rossman GB. 2003. Mixed methods in evaluation contexts: a pragmatic framework. See Tashakori & Teddlie 2003, pp. 491–512
Reichardt CS, Cook TD. 1979. Beyond qualitative versus qualitative methods. In *Qualitative and Quantitative Methods in Evaluation Research*, ed. TD Cook, CS Reichardt, pp. 7–32. Beverly Hills, CA: Sage
Richardson JG. 2009. Mill owners and Wobblies: the event structure of the Everett massacre of 1916. *Soc. Sci. Hist.* 33(2):183–215
Ridenour CS, Newman I. 2008. *Mixed Methods Research: Exploring the Interactive Continuum*. Carbondale: South. Ill. Univ. Press
Rihoux B. 2006. Qualitative comparative analysis (QCA) and related systematic comparative methods: recent advances and remaining challenges for social science research. *Int. Sociol.* 21(5):679–706
Roberts CW. 1997. A generic semantic grammar for quantitative text analysis: applications to East and West Berlin radio news content from 1979. *Sociol. Methodol.* 27(1):89–129
Roberts CW. 2000. A conceptual framework for quantitative text analysis: on joining probabilities and substantive inferences about texts. *Qual. Quant.* 34:259–74
Rorty R. 2009 [1979]. *Philosophy and the Mirror of Nature: Thirtieth Anniversary Edition*. Princeton, NJ: Princeton Univ. Press
Roscigno VJ, Hodson R. 2004. The organizational and social foundations of worker resistance. *Am. Sociol. Rev.* 69(1):14–39
Roscigno VJ, Mong S, Byron R, Tester G. 2007. Age discrimination, social closure, and employment. *Sociol. Forces* 86(1):313–34
Sale JE, Brazil K. 2004. A strategy to identify critical appraisal criteria for primary mixed methods studies. *Qual. Quant.* 38:351–65
Sale JE, Lohfeld LH, Brazil K. 2002. Revisiting the quantitative-qualitative debate: implications for mixed-methods research. *Qual. Quant.* 36:43–53
Sandelowski M. 2000. Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Res. Nurs. Health* 23(3):246–55
Sandelowski M, Voils CI, Knafl G. 2009. On quantitizing. *J. Mixed Methods Res.* 3(3):208–22
Schilt K. 2011. *Just One of the Guys? Transgender Men and the Persistence of Gender Inequality*. Chicago: Univ. Chicago Press. In press
Scott PJ, Briggs JS. 2009. A pragmatist argument for mixed methodology in medical informatics. *J. Mixed Methods Res.* 3:223–41
Scrimshaw SCM. 1990. Combining qualitative and quantitative methods in the study of intra-household resource allocation. In *Intra-Household Resource Allocation: Issues and Methods for Policy Development and Planning*, ed. BL Rogers, NP Schollsman, pp. 86–98. Tokyo: United Nations Univ. Press
Sherman LW, Strang H. 2004. Experimental ethnography: the marriage of qualitative and quantitative research. *Ann. Am. Acad. Polit. Soc. Sci.* 595:204–22
Shrank A. 2008. Homeward bound? Interest, identity, and investor behavior in a Third World export platform. *Am. J. Sociol.* 114(1):1–34
Sieber SD. 1973. The integration of fieldwork and survey methods. *Am. J. Sociol.* 78(6):1335–59
Singer B, Ryff CD, Carr D, Magee WJ. 1998. Linking life histories and mental health: a person-centered strategy. *Sociol. Methodol.* 1–51
Slonim-Nevo V, Nevo I. 2009. Conflicting findings in mixed methods research: an illustration from an Israeli study on immigration. *J. Mixed Methods Res.* 3(2):109–28
Small ML. 2009a. "How many cases do I need?" On science and the logic of case selection in field-based research. *Ethnography* 10(1):5–38
Small ML. 2009b. *Unanticipated Gains: Origins of Network Inequality in Everyday Life*. New York: Oxford Univ. Press
Small ML, Jacobs EM, Massengill RP. 2008. Why organizational ties matter for neighborhood effects: resource access through childcare centers. *Sociol. Forces* 87(1):387–414

Smith JK, Heshusius L. 1986. Closing down the conversation: the end of the quantitative-qualitative debate among educational inquirers. *Educ. Res.* 15(1):4–12
Smith RB. 2008. *Cumulative Social Inquiry: Transforming Novelty into Innovation*. New York: Guilford
Smith TA. 2007. Narrative boundaries and the dynamics of ethnic conflict and conciliation. *Poetics* 35(1):22–46
Steele JR. 1999. Teenage sexuality and media practice: factoring in the influences of family, friends, and school. *J. Sex Res.* 36(4):331–41
Stovel K. 2001. Local sequential patterns: the structure of lynchings in the Deep South, 1882–1930. *Sociol. Forces* 79(3):843–80
Strauss A, Corbin J. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage
Tarrow S. 2004. Bridging the quantitative-qualitative divide. See Brady & Collier 2004, pp. 171–79
Tashakkori A, Teddlie C. 1998. *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage
Tashakkori A, Teddlie C, eds. 2003. *Handbook of Mixed Methods in Social and Behavioral Research*. Thousand Oaks, CA: Sage
Taylor V, Kimport K, Van Dyke N, Andersen EA. 2009. Culture and mobilization: tactical repertoire, same-sex weddings, and the impact on gay activism. *Am. Sociol. Rev.* 74:865–90
Teddlie C, Tashakkori A. 2003. Major issues and controversies in the use of mixed methods in the social and behavioral sciences. See Tashakkori & Teddlie 2003, pp. 3–50
Teddlie C, Tashakkori A. 2009. *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. Los Angeles, CA: Sage
Trow M. 1957. Comment on "Participant observation and interviewing: a comparison." *Human Organ.* 16:33–35
Uehara ES. 2001. Understanding the dynamics of illness and help-seeking: event-structure analysis and a Cambodian-American narrative of "Spirit Invasion." *Soc. Sci. Med.* 52:519–36
Uzzi B. 1999. Embeddedness in the making of financial capital: how social relations and networks benefit firms seeking financing. *Am. Sociol. Rev.* 64(4):481–505
Wasserman S, Faust K. 1994. *Social Network Analysis: Methods and Applications*. Cambridge, UK: Cambridge Univ. Press
Weiss RS. 1994. *Learning from Strangers: The Art and Method of Qualitative Interview Studies*. New York: Free Press
Wellman B, Hogan B, Berg K, Boase J, Carrasco JA, et al. 2006. Connected lives: the project. In *Networked Neighbourhoods: The Connected Community in Context*, ed. P Purcell, pp. 161–216. New York: Springer
Wutick A, Lant T, White DD, Larson KL, Gartin M. 2010. Comparing focus group and individual responses on sensitive topics: a study of water decision makers in a desert city. *Field Methods* 22(1):88–110
Yin R. 1994. *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage
Yoshikawa H, Weisner TS, Kalil A, Way N. 2008. Mixing qualitative and quantitative research in developmental science: uses and methodological choices. *Dev. Psychol.* 44(2):344–54
Znaniecki F. 1945. The proximate future of sociology: controversies in doctrine and method. *Am. J. Sociol.* 50(6):514–21
Zuckerman EW, Sgourev SV. 2006. Parallel relationships in the U.S. economy. *Am. J. Sociol.* 111(5):1327–66

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