Journal of Mixed Methods Research
5(2) 150–166

DOI: 10.1177/1558689811402506
http://jmmr.sagepub.com

More Than Method?: A Discussion of Paradigm Differences Within Mixed Methods Research

Gitte Sommer Harrits[1]

Abstract

This article challenges the idea that mixed methods research (MMR) constitutes a coherent research paradigm and explores how different research paradigms exist within MMR. Tracing paradigmatic differences at the level of methods, ontology, and epistemology, two MMR strategies are discussed: nested analysis, recently presented by the American political scientist Evan S. Lieberman, and praxeological knowledge, inspired by the French sociologist Pierre Bourdieu. These strategies address two different epistemological problems, namely, the problem of causal inference and the problem of double hermeneutics. Consequently, the research designs as well as the understandings of the "qualitative component" differ noticeably. Realizing such differences at the ontological, epistemological, and methodological level contributes to discussions on how to move forward MMR, embracing differences instead of imposing homogeneity.

Keywords

epistemology, research paradigms, nested analysis, praxeological knowledge

The popularity of mixed methods research (MMR) is expanding (Bryman, 2006b; Tashakkori & Teddlie, 2010) and now also includes research areas that so far have not participated much in discussions on MMR, for example, political science and comparative politics. One result of this development is a growing pluralism in the way researchers conduct and justify MMR, and a variety of MMR typologies have therefore been suggested (e.g., Creswell & Plano Clark, 2008; Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007; Leech & Onwuegbuzie, 2009; Teddlie & Tashakkori, 2009; for an elaborate discussion of different typologies, see Natasi, Hitchcock, & Brown, 2010). Many of the present typologies focus primarily on methodological issues, including typically two dimensions, namely, status, that is, dominance of either qualitative or quantitative methods, or equality of each of the two, and sequence, with the initial use of either qualitative or quantitative methods, or the application of concurrent strategies. This means, unfortunately, that important differences in the practice and justifications of MMR are potentially neglected (Bryman, 2006a; Denscombe, 2008; for a typology beyond methodological issues, see Greene, 2007).

[1]Aarhus University, Århus, Denmark

Corresponding Author:
Gitte Sommer Harrits, Aarhus University, Universitetsparken, Bartholins Alle 7, Århus C 8000, Denmark
Email: gitte@ps.au.dk

In this article, I argue that we acknowledge the importance of philosophical and paradigmatic issues when discussing and "typologizing" differences within MMR. More specifically, I argue that MMR does not necessarily constitute a single research paradigm but is founded within different paradigms (Johnson et al., 2007; Morgan, 2007; Denscombe, 2008). To support this argument, I present and discuss two MMR strategies. They are only examples, and not exhaustive of all existing strategies, but should suffice to support the argument on the existence of paradigmatic differences within MMR. In the conclusion, I discuss possible MMR strategies founded in other research paradigms.

First, however, I devote my attention to the notion of research paradigm and the use of this concept in discussions of MMR. This is done to set up a framework for comparing the two MMR strategies. I then present the two strategies, *Nested Analysis* (Lieberman, 2005) and *Praxeological Knowledge* (Bourdieu, 1973; Fries, 2009). Both terms are explained thoroughly below. I explain the main concepts and methodological suggestions made by the two strategies, focusing on the way qualitative and quantitative methods are integrated, and then turn to a discussion on how these methodological differences are founded within paradigms constituted by ontological and epistemological assumptions.

Finally, I sum up the differences between the two strategies, supporting the argument that different research paradigms exist within MMR. I follow scholars who suggest that we acknowledge the existence of epistemological, methodological, methodic, and practical differences that coexist within the MMR family (Alise & Teddlie, 2010; Creswell & Tashakkori, 2007; Denscombe, 2008). Finally, I suggest several questions that could serve as a starting point for a paradigm-sensitive typology of MMR. I connect the main points of the article to discussions of pragmatism and argue that pragmatism could still be seen as a meta-perspective, from which different research paradigms could be compared and discussed. This argument also sums up my own position. Although my research mainly lies within the tradition of praxeological knowledge, I acknowledge the limitations of this strategy and the need for different strategies to answer different research questions and solve epistemological problems.

Mixed Methods Research and the Concept of "Research Paradigm"

It has recently been suggested that MMR should be seen as transcending paradigm wars (Creswell & Plano Clark, 2010; Felizer, 2010; Teddlie & Tashakkori, 2009), and some scholars have further suggested that pragmatism offers a suitable research paradigm within which MMR can be founded (Felizer, 2010; Johnson et al., 2007; Morgan, 2007; Scott & Briggs, 2009). I agree that MMR is inherently placed within the context of paradigm wars. However, I claim that paradigm wars are not only external to but also an internal reality of MMR, since different research paradigms are involved in the ways MMR is justified and carried out. As a result, the concept of research paradigm is also useful as guidance to the comparison of different MMR strategies.

The notion of research paradigm is not without ambiguity, though. Originally suggested by Kuhn (1962/1970), the concept of a paradigm has always carried different connotations (Morgan, 2007), two of which are especially useful here. First, the notion of paradigm refers to a set of ontological and epistemological assumptions, that is, a set of shared beliefs about the nature of the (social) world and about the knowability of this world (Denscombe, 2008). More precisely, and following Blakie (2010), I understand a research paradigm as constituted by and incorporating different ontological and epistemological assumptions, defined as "assumptions made about the nature of social reality and the way in which we can come to know this reality" (Blakie, 2010, p. 9). In contrast, I understand the term *method* to refer to "procedures and activities for selecting, collecting, organizing and analyzing data" (Blakie, 2010, p. 8).

Second, the notion of a research paradigm also refers to a common research practice, existing within a research community, and carrying with it a shared identity as well as a "specific *problem* or set of problems that are regarded as particularly significant in relation to the advancement of knowledge" (Denscombe, 2008, p. 276). To this, I add the concept of an epistemological problem, which I define as a basic problem or challenge with regard to the production and validation of knowledge that is regarded as particularly significant. Thus, although an epistemological problem may be conceptualized using methodological terminology (as, e.g., the problem of causal inference), it is constituted and made visible and urgent by epistemological (and to a lesser extent ontological) assumptions within a research paradigm.

Finally, I emphasize that I use the notion of a research paradigm without committing to a claim of incommensurability (see also Blakie, 2010). Such a claim is typically attributed to Kuhn (1962/1970), although scholars have discussed how to interpret it more precisely. For the present argument, a claim of paradigm incommensurability is not necessary, and possibly creates more problems than it solves. Thus, the notion of research paradigm as it is used here is close to Greene's "mental models" (2007).

As stated above, I claim that different MMR strategies can be seen as belonging to different research paradigms. By this, I mean that methodological choices and paradigmatic assumptions in practice are often mutually reinforcing, that is, choices at the paradigmatic level—although neither deliberate nor explicit—direct research efforts and that choices at the practical and methodological level "will expose the researcher's underlying philosophies" (Felizer, 2010, p. 7). To substantiate the claim on paradigmatic differences within MMR, I compare two MMR strategies. I begin by explaining the *methodological practices* of the MMR strategies, focusing on suggestions for combination of methods, and supplying examples of how these MMR strategies are used within different *communities of researchers*. Then I demonstrate how the MMR strategies center on a specific *epistemological problem* and finally show how this problem is related to different *epistemological and ontological assumptions*.

Nested Analysis and the Problem of Causal Inference

*Methodological Practice: Small-*N *and Large-*N *analysis*

Nested analysis was suggested in 2005 by Evan Lieberman as an approach to using mixed methods in comparative politics (Lieberman, 2005), and the term *nested* refers to the way the choice of method is contained within a coherent model, depending on the results of previous analyses. As Lieberman emphasizes, his approach is not entirely novel but rather a systematization of an approach within a field (comparative politics) where mixing large-*N* analysis (LNA) and small-*N* analysis (SNA) has been used for many years (Lieberman, 2005; Rohlfing, 2008).

The main element of the MMR strategy of nested analysis is the specification of different paths in the combination of LNA and SNA, depending on the results of the concrete analysis (see Figure 1). The researcher begins with a model that is tested within a preliminary LNA. If the model is confirmed, he or she should attempt to strengthen the causal inference using confirmatory SNA. Lieberman (2005) suggests that SNA could be used to counter problems of "causal order, heterogeneity of cases and the quality of measurement" (p. 442). In contrast, when preliminary LNA rejects the researcher's theoretical model, he or she should continue using model-building SNA.

In either case, a central contribution of nested analysis is the way it addresses research design and particularly case selection as dependent on the purpose of the SNA. In model-testing SNA, only cases that portray the expected relationships between variables should be selected, that is,

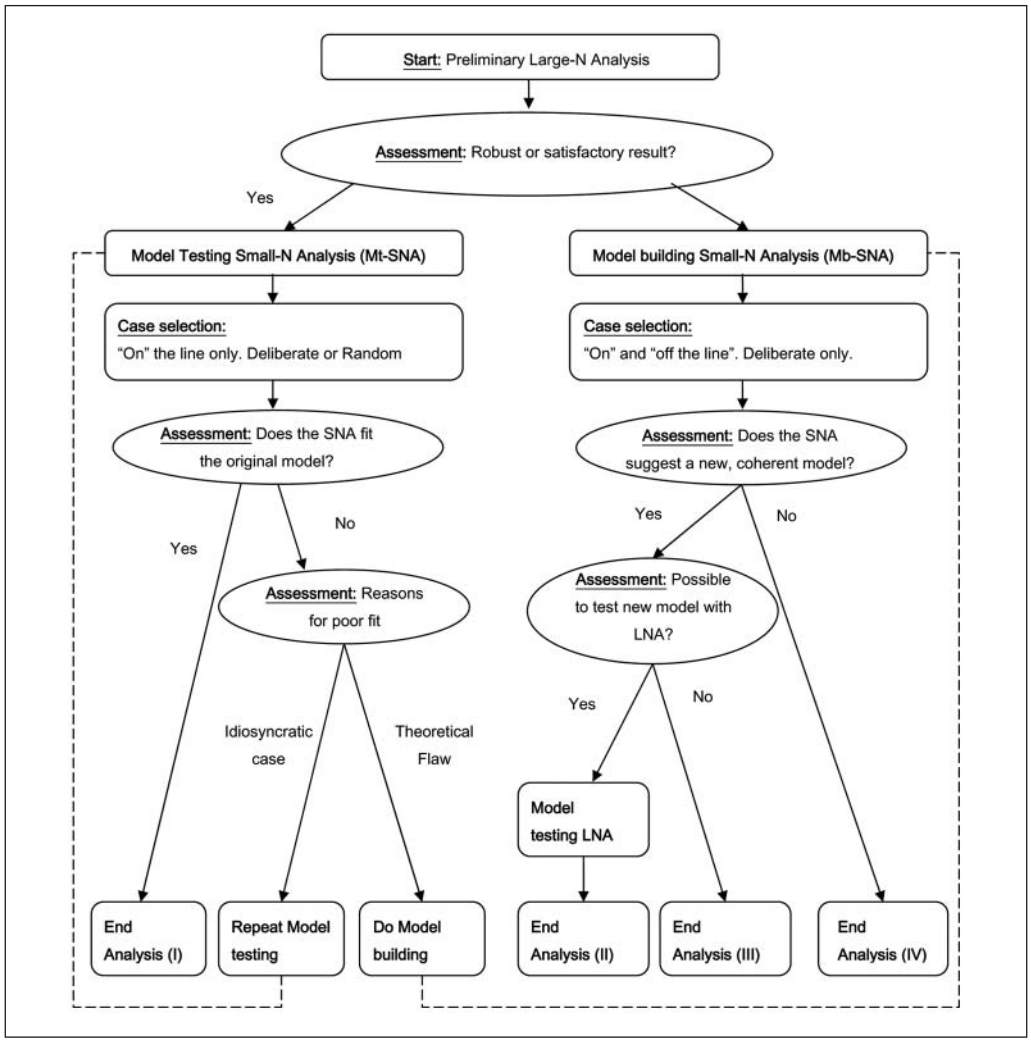

Figure 1. Mixed methods research as nested analysis (Lieberman, 2005)

cases "on the regression line" so to speak, that is, what Gerring (2007) calls the "pathway case." The aim of the SNA is, then, to test whether or not the correlation confirmed in the regression model is produced by the causal mechanisms expected by theory. This type of case analysis is typically called process tracing (see especially Bennett & Elman, 2006, 2007; George & Bennett, 2005; Mahoney, 2005). In model-building SNA, both cases "on the line" and outlier cases should be selected, since outliers are useful for assessing what is missing in the model (Gerring, 2007; Lieberman, 2005).

Lieberman himself applies nested analysis in his comparative study of tax policies in South Africa and Brazil (Lieberman, 2003). He first analyses cross-national variation of tax policies before studying in depth the historical development of tax policies in South Africa and Brazil, focusing on the political, economic, and social histories of the two countries. He then returns to

a statistical analysis of the key variables (i.e., race, region, and ability to tax the upper class) identified as salient within the two cases. The aim is clearly explanatory, and the MMR strategy is suggested to improve the prospects of causal inference (Lieberman, 2003). Similarly, Luetgert and Dannwolf (2009) use statistical analysis and then explore extreme cases in their study of legislative compliance within the European Union. Referring directly to Lieberman, they argue that nested analysis can be used to "empirically assess the applicability and stability of case-study insights in a large-N context" (Luetgert & Dannwolf, 2009, p. 317).

More broadly, the idea behind nested analysis, that is, the combination of large-*N* analysis and historical case studies and/or process tracing (Rohlfing, 2008), is widely used in the political science community, especially in the subdisciplines of comparative politics and international relations. In an analysis of leading journals in the field of comparative politics, Munck and Snyder (2007a, 2007b) urge increased use of MMR (Munck & Snyder 2007b), and in the *Oxford Handbook of Political Methodology*, Faitin and Laeron (2008) suggest that MMR

> combines the strength of large-N designs for identifying empirical regularities and patterns, and the strength of case studies for revealing the causal mechanisms that give rise to political outcomes of interest. (Faeron & Laitin, 2008, p. 758)

Also, some of the most popular comparative politics textbooks suggest combining large-*N* analysis and historical case studies or process tracing, using statistical analysis to identify patterns and deviant cases, and case studies to point out omitted variables and/or explore causal mechanisms (George & Bennett, 2005; see also Collier & Brady, 2004). Central to these suggestions is the distinction between data set observations ("observation in the sense of a row in a rectangular data set") and causal process observations ("an insight or piece of data that provides information about context or mechanism and contributes a different kind of leverage in causal inference"; Collier, Brady, & Seawright, 2004, p. 252).

In other words, the main idea behind nested analysis is that the combination of methods can help gain causal leverage. I will return to this point below, and here just note that this has the methodological consequence of alternating between LNA (or quantitative analysis) and SNA (or qualitative analysis in the form of historical case analysis), with the implicit assumption that the results translate without problems into each other. In other words, there is an implicit assumption that conflicting evidence will constitute a falsification of the theoretical model.

Summing up the argument, the MMR strategy of nested analysis can be seen as a specific research paradigm founded within a more or less delimited research community of American and European political scientists, or perhaps even in the subcommunity of comparative politics. To explore all implications of this strategy, however, we must turn to a discussion of epistemological and ontological assumptions.

The Problem of Causality and the Ontological Model of Critical Realism

The problem of causal inference is often highlighted as *the* central problem that nested analysis is intended to solve. Lieberman himself frames the presentation of nested analysis within a discussion on whether it is possible to "draw general conclusions from intensive analysis from one or a few cases" (Lieberman, 2005, p. 435) and whether large-*N* analysis faces the problem of causal heterogeneity and conceptual stretching. Furthermore, Lieberman (2005) highlights the complementarities of large-*N* and small-*N* analyses, emphasizing that "the best use of small-*N* analysis is to leverage its distinct complementarities with large-*N* analysis" (p. 440) and that the small-*N* analysis could be used "to answer questions left open by the large-*N* analysis . . . because the nature of the causal order could not be confidently inferred" (p. 440).

Already David Hume noted how the establishment of causality is epistemologically problematic and that causality seems to be primarily a psychological process, that is, an assumption about causality based on empirical observations of events (see also Brady, 2008; Holland, 1986). In the social sciences, control for spuriousness as well as establishing the causal order has typically been considered major problems in this regard (King, Keohane, & Verba, 1994), and both statistical modeling and experiments have been suggested as solutions (de Vaus, 2001; Munck & Verkuilen, 2005). However, problems of causal heterogeneity and causal complexity are not well addressed in either approach (Collier & Mahoney, 1996; Ragin, 1987), and a different strategy—the exploration of causal mechanisms and capacities—has recently attracted more attention (Brady, 2008; George & Bennett, 2005, Maxwell, 2004a, 2004b). Since "two events are causally connected when and only when there is a mechanism connecting them" (Glennan, 1996, p. 64), the central problem to be solved when establishing causality is establishing this causal mechanism, understood as "entities and activities organized such that they are productive of regular changes" (Machamer, Darden, & Craver, 2000, p. 3).

This understanding of causal mechanisms is founded within the paradigm of critical realism (George & Bennett, 2005). The point of departure is a three-layered ontological model including the empirical domain, consisting of experiences; the actual domain, consisting of events; and the real domain, consisting of causal mechanisms (Bhaskar, 1978). Presenting this model, British philosopher Roy Bhaskar (1978) argues that we can assume such an independent and structured world of causal structures and generative mechanisms to exist independent of how we experience it, because this is the only way to make sense of the historical development of science.

Critical realists will seek to understand any social event (at the level of the actual domain) by exploring the underlying causal structures and mechanisms (at the level of the real domain; e.g., Archer, 2000). Furthermore, causal powers are assumed to be operating at the most basic level of reality. However, at the level of events, different causal powers may be operating at the same time in a complex web, with opposing or interacting effects. As Sayer (1992) points out, in the basic model within realism "objects and social relations have causal powers which may or may not produce regularities" (p. 2). And because of this, exploring causality by observing regularities must be supplemented (or replaced) by observing mechanisms and by exploring single events as a way of sorting out causal complexities (Maxwell, 2004a, 2004b).

Returning to the MMR strategy of nested analysis, this idea of "zooming in" on the causal processes operating within particular historical events is crucial, since it frames the way the different steps and units of the analysis are seen to be related. As mentioned, the defining element of nested analysis is the continuous alternation between LNA and SNA as well as the way all analytical steps are directed toward the same goal, namely, "to make inferences about the unit of analysis that is shared between the two types of analysis" (Lieberman, 2005, p. 440). When mixing methods in the fashion of nested analysis, we are observing the same reality from different levels of analysis. This argument, however, is only reasonable because of the implicit acceptance of the realist ontological model, where a basic continuity between the actual domain (events) and the real domain (mechanisms) exists.

This reliance on a critical realist ontological model is also related to implicit assumptions regarding the appropriate unit of analysis. When we look at the use of nested analysis in comparative politics, it becomes evident that social reality is implicitly understood to be cases defined as nations, consisting of subcases such as organizations and individuals. Indeed, Lieberman does claim that although he refers solely to examples taken from analyses at the country level, nested analysis should be relevant also for analyzing individual behavior or attitudes (Lieberman, 2005). However, he also states that more often than not LNA (i.e., *not* using a MMR strategy) will be more suitable for analyzing individual behavior, since "the prospect of explaining the exceptional nature of a particular individual is unlikely to be of intrinsic interest in the way scholars

are likely to be interested in the particularities of larger social units, such as nation states" (Lieberman, 2005, p. 436, n. 2).

Two points follow from this. First, it is clear that what can be gained from SNA is insight into particular cases and the workings of particular combinations of causal mechanisms. This is related to the specific understanding of qualitative methods as process tracing and historical analysis, using a variety of empirical data to trace the sequencing of events and the workings of causal mechanisms in historical processes (see, e.g., Bennett & Elman, 2007; Khong, 1992; Moravsic, 1998; Tannenwald, 1999) and further related to the epistemological underpinnings of quantitative and qualitative methods within nested analysis. Following an argument made already by Windelband and Rickert in the so-called *Methodenstreit* in German philosophy, quantitative methods are assumed to fulfill a generalizing of nomothetic purpose, whereas qualitative methods are seen as individualizing and idiographic (Mos, 1998). Second, it is assumed that individual behavior can easily be analyzed using quantitative analysis. This shows that the problem of double hermeneutics (which I will return to below) is not central to this approach. Presumably, this is also connected to a rather idiosyncratic terminology within American political science, where qualitative methods are understood solely as historical methods and case analysis and thus separated from interpretive analysis (i.e., phenomenological, hermeneutic, or discourse analysis; Yanow, 2005).

In sum, causal inference is the key epistemological problem in the nested analysis. Furthermore, the main epistemological and ontological assumptions are drawn from critical realism, underpinning the way qualitative and quantitative methods are expected to complement each other without problems. This is markedly different from the MMR strategy of praxeological knowledge, to which we now turn our attention.

Praxeological Knowledge and the Problem of Double Hermeneutics

Methodological Practice: Explaining and Understanding

French sociologist Pierre Bourdieu, who throughout his career insisted on mixing quantitative and qualitative methods, suggested the term *praxeological knowledge* in a discussion of science and knowledge (Bourdieu, 1973; see also Bourdieu, Chamboredon, & Passeron, 1991). Knowledge, Bourdieu argues, can have three forms: Phenomenological knowledge makes the level of practice visible for the researcher by describing or reconstructing subjective and intersubjective meanings and experiences. However, this kind of knowledge has no scientific value, since it cannot question the presuppositions of itself. Therefore, "objective knowledge," that is, knowledge from an observer's outside perspective, can be seen as an epistemological advancement within the social sciences, since it presents a view of the research object (or subject) not accessible to itself. Such a "view from the outside" is made possible, for example, by the approach of structuralism or by the use of statistical techniques and access to systematically collected data, connecting, for example, observations made at different points in time.

However, although it is a necessary part of the research process, objective knowledge risks hypostatizing itself as reality. Researchers tend to produce what Bourdieu terms *scholastic fallacies*, forgetting that people do not act with the knowledge available to researchers (Bourdieu, 2000, 2004). To produce praxeological knowledge, the researcher must thus make a second break (the first break being made by the objective model) and incorporate reflexively into scientific discussions of the limitations of objective knowledge. This implies, Bourdieu argues, moving from the *opus operatum*, that is, analyzing structures and regularities, to the *modus operandi*, that is, analyzing principles of production of these regularities inherent in practice (Bourdieu 1973, 2004).

In sum, the strategy of praxeological knowledge implies a specific ordering of the research process: First, an initial break with common sense is needed, including formulation of a research problem and building and testing of an objective model. Second, this must be followed by a second break with this objective model, incorporating a reflexive sense of the limitations to objective knowledge.

Bourdieu claims that one of the greatest obstacles for social scientists in the initial parts of the research process is their inherent familiarity with their object, which creates a tendency to produce spontaneous sociology (e.g., Bourdieu et al., 1991). Consequently, the first step of a research process involves posing a research question that is *not* posed by the research object (or subject) itself (Bourdieu et al., 1991). The formulation of the research problem is indeed part of the scientific process, and echoing what Peirce called abduction, Bourdieu suggests that the *ars inveniendi* of research should be underpinned by different methods for formulating research questions and hypotheses.

The next step of the research process is the objective construction of the object, that is, the construction and testing of an explanation from an observer's perspective. In practice, though, the objective construction and the posing of the research question are inherently related, since the gradual construction of the object, theoretically and empirically, also constitutes a further break with common sense. Figure 2 shows that there is an iterative logic to this strategy, with the going back and forth between building and testing different models. Central in this step is the insistence on continuously confirming or rejecting the models, using appropriate method and data.

Regarding choice of method, Bourdieu insists that almost any method has specific epistemological presuppositions, and therefore, we need to be sure that we do not import any "unconscious models of reality" by using only traditional methods or only methods that we have been trained to use. Bourdieu himself insisted on using correspondence analysis, arguing that this statistical technique escaped the linear logic inherent in regression models (Bourdieu, 1984; Rouanet, Ackermann, & Le Roux, 2000).

Moving to the third step of the analysis, the crucial element of praxeological knowledge is introduced, namely, the combination of "explaining" and "understanding," or what could also be called "bringing the lifeworld back in." This implies the recognition of the fact that if our theoretical model is true, there must be practices producing the regularities that we can observe in quantitative analyses. As Bourdieu (1984) puts it, "Systematicity is found in the *opus operatum* because it is in the *modus operandi*" (p. 173). Therefore, the third logical step of the research process involves the explicit investigation of the modus operandi, that is, the logic of practices that produce the systematic patterns in actions and events that we observe. At the level of sociological theory, Bourdieu's concept of habitus provides this exact function. Habitus is the translation of structures into dispositions (cognitive, normative, aesthetic, and bodily schemes of perception and taste), transforming structural constraint into willed actions of the agent.

In almost all of his empirical work, Bourdieu strived to implement this MMR strategy of praxeological knowledge. In many of his writings (e.g., Bourdieu, 1984, 1988, 1996), he combined correspondence analysis of survey data with interpretive analysis of texts, pictures, and interviews, providing a unique combination of statistical models, identifying patterns of, for example, behavior and attitudes, and interpretive "stories," moving closer to an understanding of practice and habitus. The same strategy has been taken up by scholars working within a "Bourdieusian" theoretical framework, for example, at the Centre for Research on Socio-Cultural Change in Manchester, U.K., where the use of MMR strategies is widespread (e.g., Bennett et al., 2009; Silva, Warde, & Wright, 2009; Silva & Wright, 2008).

Similarly, I adopted an MMR strategy in a project studying the social determinants of political participation. I first conducted an explanatory correspondence analysis identifying patterns of political practices and their structuring by social class, understood as the combination of cultural and economic capital. The quantitative analysis confirmed that patterns of political participation

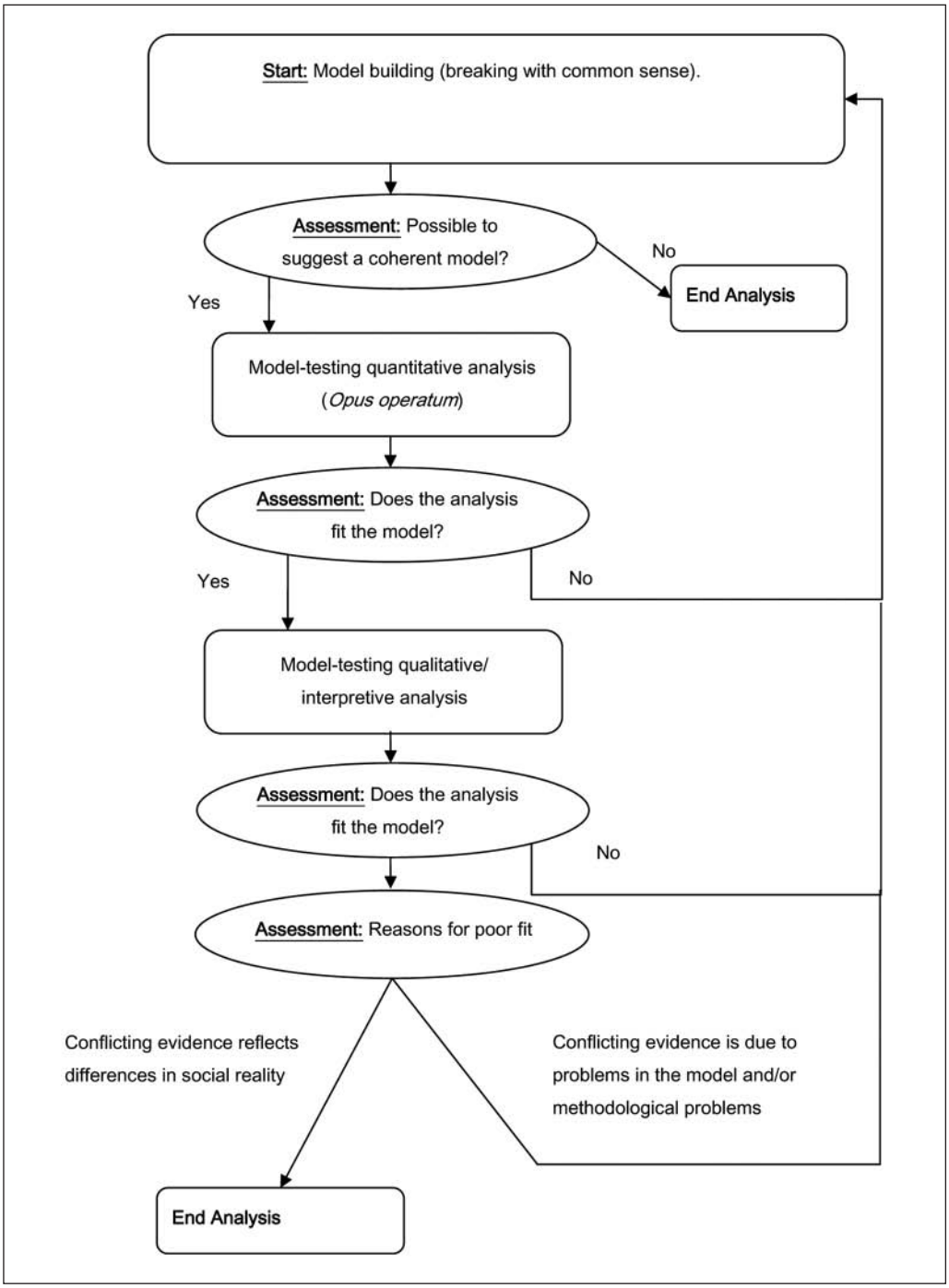

Figure 2. Mixed methods research as praxeological knowledge

followed patterns of social class and distributions of social resources. However, to break with the external and static view constructed by the statistical modeling, and to understand more closely the modus operandi of this relationship, I conducted a qualitative study of political habitus and

practice in different classes. Based on information from the quantitative study I selected 18 respondents with whom I conducted a semistructured and lifeworld-focused interview (Kvale, 1996). The interviews were analyzed from an interpretive, within-case perspective, using qualitative content analysis to carve out habitus as structures of meaning and dispositions as well as logics of political practice (Harrits, 2005). Below, I discuss more closely how the results of the two studies fitted together.

In sum, the strategy of praxeological analysis, originally suggested and used by Pierre Bourdieu, can be said to exist today as a research strategy used within a specific sociological community of scholars who are inspired by Bourdieu's writings and typically study social stratification and change (see also Creswell, Shope, Plano Clark, & Green, 2006). Again, however, we need to proceed to a discussion of epistemology and ontology to fully understand the logic of this MMR strategy.

The Problem of "Double Hermeneutics"

The specific combination of methods within praxeological knowledge may look like the strategy of nested analysis, where the qualitative component of the analysis is used to explore causal mechanisms. However, more important than causality is here the possibility of exploring interpretatively the reasons and logics given in the discourses of the subjects themselves and comparing them with the results of statistical analysis. In other words, more than presenting a causal model of mechanisms (i.e., an ontological model in line with critical realism), analyses of practice, habitus, and modus operandi point toward an epistemological double perspective needed to explain *and* understand the social practices of human beings. As Weininger points out, referring to Dilthey's famous distinction between *Erklären* and *Verstehen* (Makkreel, 1975; Harrington, 2000), analyses of habitus are "intrinsically *verstehend*" (Weininger, 2002, p. 73), and to understand the mechanisms responsible for the systematic patterns in our objective model, we must conduct an interpretive analysis of these practices and their logic. Or, as Bourdieu argues, "We must posit that *understanding and explaining are one*" (Bourdieu et al., 1999, p. 613).

It is precisely this insistence on holding together explaining and understanding, or as he says elsewhere, of making "realist constructions" that constitutes the essence of praxeological knowledge (Bourdieu et al., 1999; Fries, 2009), and it is inherently related to its different point of departure. So where the problem of causal inference is evidently the main issue in nested analysis, praxeological knowledge is set up to "solve" a different epistemological problem:

> [T]he particularity of the social sciences requires [the researcher] to work . . . towards constructing a scientific truth capable of integrating the observer's vision and the truth of the practical vision of the agent as a point of view which is unaware of being a point of view and is experienced in the illusion of absoluteness. (Bourdieu, 2004, p. 116)

In other word, the mixing of methods should solve the basic epistemological problem of the social sciences, namely, that the research object is a research *subject*, and has an understanding of his/her own social reality that sometimes competes with the researcher's understanding. As formulated by another sociologist, Anthony Giddens (1993), this poses a problem of double hermeneutics:

> Sociology, however, deals with a universe which is already constituted within frames of meaning by social actors themselves, and reinterprets these within its own theoretical schemes, mediating ordinary and technical language. (p. 170)

Because of this, Giddens (1993) continues, researchers face a problem of adequacy, that is, can they go beyond the actors' understandings, and does first-order understandings of actors have epistemological value in social research. In other words, should we rely on the reasons people give for their actions, when they explain what they are doing, or should we causally explain people's behavior independently of what they might think they are doing? (For a parallel discussion, see Pitkin, 1972.) In light of this problem, praxeological knowledge mixes methods to use the complementarities of quantitative and qualitative (i.e., interpretive) methods to integrate a scientific objective perspective with an interpretive perspective taking serious the points of view of actors and practice.

As shown above, nested analysis and the epistemological problem of causal inference further corresponded to and relied on the ontological model of critical realism. In comparison, and following the research paradigm of French historical epistemology (e.g., Bachelard, 1968; for an excellent discussion, see Broady, 1991), the ontological assumptions of praxeological knowledge are more implicit. In fact, the research paradigm of historical epistemology relies almost entirely on epistemological assumptions of the way knowledge must be constructed by breaking with common sense, and (in Bourdieu's version) by using the complementary of scientific and practical perspectives and knowledge (see also Bourdieu, 2000, 2004).

However, one could see the ontological model of praxeological knowledge in the distinction between what Habermas calls lifeworld and system (Habermas, 1981) and what other scholars call intersubjectivity and transsubjectivity (Benhabib, 1986), or "Gemeinschaft" and "Gesellschaft" (Tönnies, 1964). Implied in this distinction is the idea that society can or must be seen in a double perspective. On the one hand, it can be seen as a sphere of practices, interactions, and intersubjective understanding. Within this lifeworld perspective, the basic form of social integration is normative, that is, the coordination of actions is based on mutual understanding (see, Habermas, 1981). This is not to say that the lifeworld is free from power and distortion, but it points to the basic way of "living together" as human beings, sharing a culture and acting on the basis of a "natural attitude" [die natürliche Einstellung] (Schütz & Luckmann, 2003).

On the other hand, society can *also* be seen as a sphere of interactions and structures not based on the social or normative coordination of action. As pointed out ever since Hegel, Marx, Durkheim, and others, modern societies develop a division of labor resulting in the constitution of an emergent "systemic" or "structural" level of society, presenting itself as objective vis-à-vis the actors (Benhabib, 1986). In this sphere, the logic of action and integration is systemic, that is, freed from the need for mutual understanding.

The distinction between system and lifeworld relates straightforwardly to the epistemological problems of double hermeneutics and to the strategy of praxeological knowledge. As noted by Benhabib (1986), there is an inherent relationship between arguing that society presents an emergent level of systems or structures, going beyond the interactions and comprehensions of actors in their daily life, and arguing that society must be analyzed from an observer's perspective, that is, from an outside and explanatory perspective. Complementarily, there is an inherent relationship between the concept of the lifeworld and arguing that society must be analyzed from a participant's perspective, that is, from a perspective within, focusing on "mutual understanding." Conceptualizing society as system and lifeworld means, then, that social analysis must be done both from outside and from within, or as Bourdieu argued, that explaining and understanding are one.

Furthermore, the possibility of the two perspectives conflicting is inherent within this paradigm. In other words, it should come as no surprise that an objective model produces a different story about a social reality than what can be explored in an interpretive analysis, since such different "stories" may be inherent to reality itself. As pointed out by Bourdieu, people have a tendency to accept and naturalize their own practices, and this may exactly be the precondition for

the functioning of practice (Bourdieu, 2000). Thus, divergent results must be handled with extreme rigor. Surely, conflicting evidence may be a sign that the theoretical model is false, or that our data or analyses are invalid, but this is not necessarily the case. Unfortunately, though, the only way to deal with this problem is meticulous investigation, theoretical rigor, and rational argumentation.

My own research is an example of such a conflict. The theoretical claim as well as the statistical models indicated that social class structured political participation, but in vast contrast to these results, almost all interviewees in the interpretive analysis insisted that social class had nothing to do with their political participation. However, further interpretive analysis documented clear patterns in political practices and political habitus between social classes, especially in the conception of politics, in the understanding of citizenship, and in the "naturalness" with which individuals approached political participation. Also, the analysis showed how the discourse presenting political participation as "free of class" clearly functioned as legitimating political inequalities, that is, as an instance of what Bourdieu calls *meconnaissance* (misrecognition). Thus, the overall conclusion of the research project went against the immediate results of the interpretive analysis but was supported by the quantitative analysis as well as by the further exploration and interpretation of the qualitative data (Harrits, 2005).

In sum, praxeological knowledge can be seen as an MMR strategy founded in the problem of double hermeneutics and in a conception of society as both system and lifeworld. Furthermore, the strategy of praxeological knowledge is typically used within a community of sociologist studying social and cultural stratification and change, and the qualitative component is understood as interpretive analysis in the broadest sense. Finally, whereas the typical research unit in nested analysis is the nation, research using the strategy of praxeological knowledge typically focuses on the individual, and in further contrast to nested analysis the possibility of conflicting evidence stemming from quantitative and qualitative analysis is inherent in this strategy.

Concluding Discussion: Embracing Difference

This article has presented two examples of different MMR strategies presenting two very different research paradigms, that is, critical realism and historical epistemology. As I have hopefully shown, the differences can be traced at the level of methodological practices and research practices within different communities of scholars, as well as at the level of epistemological and ontological assumptions and, not least, in the epistemological problem functioning as a reason for engaging in MMR in the first place.

On the one hand, the epistemological problem of causal inference is solved by the strategy of nested analysis, suggesting that quantitative and qualitative (i.e., historical, comparative) methods can supplement each other in the attempt to gain causal leverage, using quantitative analysis to identify patterns and correlations and qualitative analysis to trace causal mechanisms. On the other hand, the epistemological problem of double hermeneutics is solved by praxeological knowledge, suggesting that quantitative analysis can supply an objective or observer's perspective that can then be supplemented (and reflexively contextualized) by an interpretive perspective integrating the views of the subjects themselves (see Table 1).

The implication of this discussion is that typologies on MMR confined to variations at the level of methodology, although useful and important, may fail to capture important differences at the level of epistemology and ontology. This further has to do with the way we understand the distinction between quantitative and qualitative methods. Although we often use the distinction between qualitative and quantitative methods as indicating an existing and important difference within the social sciences, it seems difficult to point toward one defining element (Mahoney & Goertz, 2006). In other words, the difference between qualitative and quantitative methods is not

Table 1. Comparing Nested Analysis and Praxeological Knowledge

	Nested Analysis	Praxeological Knowledge
Research paradigm	Critical realism	Historical epistemology
Epistemological problem	Causality	Double hermeneutics
Ontological model	Three-layered model: the empirical, the actual, and the real domain	Society conceived as system and lifeworld
Assumptions regarding quantitative and qualitative methods	Quantitative methods (LNA) can provide general/nomethetic knowledge, whereas qualitative knowledge can provide knowledge on causal mechanisms and/or knowledge on concrete instances of events (idiographic knowledge)	Quantitative analysis can provide objective knowledge from an observer's perspective (Erklären), whereas qualitative knowledge can provide interpretations from a subjective perspective (Verstehen)
Relation between qualitative and quantitative methods	Mutually translatable, since they are observing the same reality; conflicting evidence is falsification of the theoretical model	Different perspectives on reality and therefore not mutually translatable; conflicting evidence may be part of reality
Understanding of qualitative analysis	Historical analysis/process tracing	Interpretive analysis
Appropriate research unit	Nation states, with nested subcases of individuals, organization, etc.	Individuals
Typical research questions addressed	Historical development of policies	Social and cultural stratification and change
Research communities	Scholars in comparative politics and international relations	Scholars in sociology, more specifically in the theoretical tradition of Pierre Bourdieu

Note: LNA = large-*N* analysis.

solely a methodological distinction, and therefore, discussions of MMR cannot be confined to the methodological level but must be carried out at the level of research paradigms, including issues of epistemology and ontology.

I propose the following questions as a first step toward a more paradigm-sensitive MMR typology:

- What is the epistemological problem assumed answered by MMR?
- What is the underlying ontological model, and what are the epistemological assumptions regarding quantitative and qualitative methods?
- What is the methodological relationship between qualitative and quantitative methods; in particular, what are the assumptions regarding conflicting evidence?
- How are qualitative methods understood more precisely?
- What are the assumed appropriate research units?

As mentioned in the introduction, I do not claim that the strategies discussed here exhaust the possible differences within MMR. Certainly, other epistemological problems and ontological and epistemological assumptions would promote different MMR strategies. For instance, one could easily imagine the problem of scientific progress and the foundation of critical rationalism (in the Popperian tradition) implying an MMR strategy with a clear division of labor and status between the quantitative and qualitative component of analysis much like suggested in the

discussion of Barton and Lazerdsfeld or Campbell and Fiske (Campbell & Fiske, 1959; Kelle & Erzberger, 1999). And one could just as easily imagine the problem of incommensurability and perspectivism and a foundation within a poststructuralist epistemology, also implying a different strategy for mixing methods. In any event, to contribute to the development of MMR, it seems important to recognize and embrace these differences, instead of monopolizing one specific strategy as holding *the* answer to what mixed methods research is about.

However, returning to the discussion on pragmatism, my argument is not that we dismiss pragmatism as an important perspective for discussions of MMR. Rather, I suggest that we widen the meta-perspective within the pragmatic perspective. Truth, pragmatists argue, is constructed in the reflexive and rational reasoning within a community of scholars using different tools (methods, theories, concepts, etc.) to answer specific research problems (Bernstein, 1983, 1992; Dewey, 1991; Habermas, 1999). Here, I suggest that we extend reasoning regarding the choice of method in general, and the choice of MMR in particular, to include arguments on the epistemological problems—and solutions—that our methods may entail. In my opinion, the notion of epistemological problems is particularly important for understanding how scientists use and justify research strategies and for advancing discussions on the use of MMR.

Acknowledgement

I wish to thank Elisabeth de Silva, Robert Adcock, and the three anonymous reviewers for very useful comments and suggestions for this article.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

Alise, M. A., & Teddlie, C. (2010). A continuation of the paradigm wars? Prevalence rates of methodological approaches across the social/behavioral sciences. *Journal of Mixed Methods Research*, *4*(2), 103-126.

Archer, M. S. (2000). *Being human: The problem of agency*. Cambridge, England: Cambridge University Press.

Bachelard, G. (1968). *The philosophy of no. A philosophy of the new scientific mind*. New York, NY: Orlon.

Benhabib, S. (1986). *Critique, norm and utopia. A study of the foundations of critical theory*. New York. NY: Columbia University Press.

Bennett, A., & Elman, C. (2006). Complex causal relations and case study methods: The example of path dependence. *Political Analysis*, *14*, 250-267.

Bennett, A., & Elman, C. (2007). Case study methods in the international relations subfield. *Comparative Political Studies*, *40*, 170-195.

Bennett, T., Savage, M., Silva, E. B., Warde, A., Gayo-Cal, M., & Wright, C. (2009). *Culture*, *class, distinction*. London, England: Routledge.

Bernstein, R. J. (1983). *Beyond objectivism and relativism*. Philadelphia: University of Pennsylvania Press.

Bernstein, R. J. (1992). The resurgence of pragmatism. *Social Research*, *59*, 813-840.

Bhaskar, R. (1978). *A realist theory of science*. Sussex, England: Harvester Press.

Blakie, N. (2010). *Designing social research* (2nd ed.). Cambridge, England: Polity Press.

Bourdieu, P. (1973). The three forms of theoretical knowledge. *Social Science Information*, *12*, 53-80.

Bourdieu, P. (1984). *Distinction. A social critique of the judgement of taste*. London, England: Routledge.

Bourdieu, P. (1988). *Homo academicus*. Cambridge, England: Cambridge University Press.

Bourdieu, P. (1996). *The state nobility*. Cambridge, England: Polity Press.

Bourdieu, P. (2000). *Pascalian meditations*. Cambridge, England: Polity Press.

Bourdieu, P. (2004). *Science of science and reflexivity*. Cambridge, England: Polity Press. (Original work published 2001)

Bourdieu, P., Accardo, A., Balazs, G., Beaud, S., Bonvin, F., Boudieu, E., . . . Wacquant, L. J. D. (1999). *The weight of the world. Social suffering in contemporary society*. Cambridge, England: Polity Press.

Bourdieu, P., Chamboredon, J.-C., & Passeron, J.-C. (1991). *The craft of sociology—Epistemological preliminaries.* Berlin, Germany: Verlag Walter de Gruyter. (Original work published 1968)

Brady, H. E. (2008), Causation and explanation. In J. M. Box-Steffensmeier, H. E. Brady, & D. Collier (Eds.), *The Oxford handbook of political methodology* (pp. 217-270). Oxford, England: Oxford University Press.

Broady, D. (1991). *Sociologi og Epistemologi. Om Pierre Bourdieus författerskap och den historiske epistemologin* [Sociology and Epistemology: On Pierre Bourdieu and Historical Epistemology]. Stockholm, Sweden: HLS Förlag.

Bryman, A. (2006a). Integration quantitative and qualitative research: How is it done? *Qualitative Research*, *6*, 97-113.

Bryman, A. (2006b). *Mixed methods I-IV*. London, England: SAGE.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*, 81-105.

Collier, D., & Brady, H. E. (2004). *Rethinking social inquiry. Diverse tools, shared standards*. Lanham, MD: Rowman & Littlefield.

Collier, D., & Mahoney, J. (1996). Insights and pitfalls: Selection bias in qualitative research. *World Politics*, *49*, 56-91.

Collier, D., Brady, H. E., & Seawright, J. (2004). Sources of leverage in causal inference: Toward an alternative view of methodology. In D. Collier & H. E. Brady (Eds.), *Rethinking social inquiry. Diverse tools, shared standards* (pp. 229-266). Lanham, MD: Rowman & Littlefield.

Creswell, J. W., & Tashakkori, A. (2007). Editorial: Differing perspectives on mixed methods research. *Journal of Mixed Methods Research*, *1*(4), 303-308.

Creswell, J. W., & Plano Clark, V. L. (2008). *The mixed methods reader*. Thousand Oaks, CA: SAGE.

Creswell, J. W., & Plano Clark, V. L. (2010). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE.

Creswell, J. W., Shope, R., Plano Clark, V. L., & Green, D. O. (2006). How interpretive qualitative research extends mixed methods research. *Research in the Schools*, *13*, 1-11.

de Vaus, D. (2001). *Research design in social research*. London, England: SAGE.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of Mixed Methods Research*, *2*(3), 270-283.

Dewey, J. (1991). The pattern of inquiry. In J. Dewey (Ed.), *The later works* (p. 12). Carbondale: Southern Illinois University Press.

Faeron, J. D., & Laitin, D. D. (2008). Integrating qualitative and quantitative methods. In J. M. Box-Steffensmeier, H. E. Brady, & D. Collier (Eds.), *Political methodology* (pp. 756-776). Oxford, England: Oxford University Press.

Felizer, M. Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, *4*(1), 6-16.

Fries, C. (2009). Bourdieu's reflexive sociology as a theoretical basis for mixed methods research. *Journal of Mixed Methods Research*, *3*(4), 326-348.

George, A. L., & Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge: MIT Press.

Gerring, J. (2007). *Case study research. Principles and practices*. New York, NY: Cambridge University Press.

Giddens, A. (1993). *New rules of sociological methods* (2nd ed.). Cambridge, England: Polity Press. (Original work published 1976)

Glennan, S. S. (1996). Mechanisms and the nature of causation. *Erkenntnis*, *44*, 49-71.

Greene, J. C. (2007). *Mixed methods in social inquiry*. San Francisco, CA: Wiley.

Habermas, J. (1981). *Theorie des kommunikativen Handelns*, *Band I+II* [The Theory of Communicative Action, Vol I+II]. Frankfurt, Germany: Suhrkamp Verlag.

Habermas, J. (1999). *Wahrheit und Rechtfertigung. Philosophische Aufsätze* [Truth and Justification]. Frankfurt: Suhrkamp Verlag.

Harrington, A. (2000). In defence of Verstehen and Erklären: Wilhelm Dilthey's ideas concerning a descriptive and analytical psychology. *Theory and Psychology*, *10*, 435-451.

Harrits, G. S. (2005). *Hvad betyder klasse? En rekonstruktion af klassebegrebet med henblik på en analyse af sammenhængen mellem klasser og politisk deltagelse i Danmark* [The meaning and importance of class. Reconstructing the concept of social class and analysing the relationship between social class and political participation in Denmark]. Århus, Denmark: Forlaget Politica.

Holland, P. W. (1986). Statistics and causal inference. *Journal of American Statistical Association*, *81*, 945-960.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*, 14-26.

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Towards a definition of mixed methods research. *Journal of Mixed Methods Research*, *1*(2), 112-133.

Kelle, U., & Erzberger, C. (1999). Integration Qualitativer und Quantitativer Methoden. Methodologische Modelle und ihre Bedeutung für die Forschungspraxis [The Integration of Qualitative and Quantitative Methods, Methodological Models and their impact on research practice]. *Kölner Zeitschrift für Soziologie und Sozialpsykologie, 51*, 509-531.

Khong,Y. F. (1992). *Analogies at war: Korea, Munich, Dien Bien Phu, and the Vietnam decisions of 1965*. Princeton, NJ: Princeton University Press.

King, G., Keohane, R. O., & Verba, S. (1994). *Designing social inquiry. Scientific inference in qualitative research*. Princeton, NJ: Princeton University Press.

Kuhn, T. (1970). *The structure of scientific revolutions* (2nd ed., enlarged). Chicago, IL: University of Chicago Press. (Original work published 1962)

Kvale, S. (1996). *InterViews. An introduction to qualitative research interviewing*. London, England: SAGE.

Leech, N. L., & Onwuegbuzie, A. J. (2009). A typology of mixed method research designs. *Quality and Quantity*, *43*, 265-275.

Lieberman, E. S. (2003). *Race and regionalism in the politics of taxation in Brazil and South Africa*. Cambridge, England: Cambridge University Press.

Lieberman, E. S. (2005). Nested analysis as a mixed-method strategy for comparative research. *American Political Science Review*, *99*, 435-452.

Luetgert, B., & Dannwolf, T. (2009). Mixing methods: A nested analysis of EU member state transposition patterns. *European Union Politics*, *10*, 307-334.

Machamer, P., Darden, L., & Craver, C. F. (2000). Thinking about mechanisms. *Philosophy of Science*, *67*, 1-25.

Mahoney, J. (2005). Clarifying comparative-historical methodology. *Qualitative Methods*, *3*, 19-22.

Mahoney, J., & Goertz, G. (2006). A tale of two cultures: Contrasting quantitative and qualitative research. *Political Analysis*, *14*, 227-249.

Makkreel, R. A. (1975). *Dilthey. Philosopher of the human studies*. Princeton, NJ: Princeton University Press.

Maxwell, J. A. (2004a). Qualitative research, and scientific inquiry in education. *Educational Researcher*, *33*, 3-11.

Maxwell, J. A. (2004b). Using qualitative methods for causal explanation. *Field Methods*, *16*, 243-264.

Moravcsik, A. (1998). *The choice for Europe: Social purpose and state power from Messina to Maastricht.* Ithaca, NY: Cornell University Press.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, *1*(1), 48-76.

Mos, L. P. (1998). On methodological distinctions: Nomothetic psychology, or historical understanding. *Theory and Psychology*, *8*, 39-57.

Munck, G. L., & Snyder, R. (2007a). Debating the direction of comparative politics: An analysis of leading journals. *Comparative Political Studies*, *40*, 5-31.

Munck, G. L., & Snyder, R. (2007b). Rejoinder: Visions of comparative politics. A reply to Mahoney and Wibbels. *Comparative Political Studies*, *40*, 45-47.

Munck, G. L., & Verkuilen, J. (2005). Research designs. *Encyclopedia of Social Measurement*, *3*, 385-395.

Natasi, B. K., Hitchcock, J. H., & Brown, L. M. (2010). An inclusive framework for conceptualizing mixed methods design typologies. Moving towards fully integrated synergistic research models. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (3rd ed., pp. 305-338). Thousand Oaks, CA: SAGE.

Pitkin, H. F. (1972). *Wittgenstein and justice. On the significance of Ludwig Wittgenstein for social and political thought*. Berkeley: University of California Press.

Ragin, C. C. (1987). *The comparative method*. Berkeley: University of California Press.

Rohlfing, I. (2008). What you see and what you get. Pitfalls and principles of nested analysis in comparative research. *Comparative Political Studies*, *41*, 1492-1514.

Rouanet, H., Ackermann, W., & Le Roux, B. (2000). The geometric analysis of questionnaires: The lesson of Bourdieu's *La Distinction*. *Bulletin de Méthodologie Sociologique*, *65*, 5-15.

Sayer, A. (1992). *Method in social science: A realist approach* (2nd ed.). London, England: Routledge.

Schütz, A., & Luckmann, T. (2003). *Strukturen der Lebenswelt* [Structures of the life-world]. Konstanz, Germany: UKV Verlagsgesellschaft mbH.

Scott, P. J., & Briggs, J. A. (2009). A pragmatist argument for mixed methodology in medical informatics. *Journal of Mixed Methods Research*, *3*(3), 223-241.

Silva, E. B., & Wright, D. (2008). Researching cultural capital: Complexities in mixing methods. *Methodological Innovations*, *2*(3). Retrieved from http://erdt.plymouth.ac.uk/mionline/public_html/viewarticle.php?id=65&layout=html

Silva, E. B., Warde, A., & Wright, D. (2009). Using mixed methods for analyzing culture: The Cultural Capital and Social Exclusion Project. *Cultural Sociology*, *3*, 299-316.

Tannenwald, N. (1999) The nuclear taboo: The United States and the normative basis of nuclear non-use. *International Organization*, *53*, 433-468.

Tashakkori, A., & Teddlie, C. (2010). *Handbook of mixed methods in social and behavioral research* (3rd ed.). Thousand Oaks, CA: SAGE.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research. Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, CA: SAGE.

Tönnies, F. (1964). *Community and society*. East Lansing: Michigan State University Press. (Original work published 1912)

Weininger, E. B. (2002). Class and causation in Bourdieu. In J. M. Lehmann (Ed.), *Current perspectives in social theory: Bringing capitalism back for critique by social theory* (Vol. 21, pp. 49-114). Greenwich, CT: JAI Press.

Yanow, D. (2005). In the house of "science," there are many rooms. In K. Renwick Monroe (Ed.), *Perestroika. The Racucous rebellion in political science* (pp. 200-217). New Haven, CT: Yale University Press.