

# Mixed Methods Research in the Study of Political and Social Violence and Conflict

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## Abstract

The study of political and social violence and conflict has expanded in recent decades, concurrent with a rise in the use of mixed methods research (MMR) throughout the social sciences. This article examines how methods are best integrated in studies of violence and conflict, critically reviewing examples from previous prominent works and suggesting directions for future research. I explore the benefits of MMR for understanding structures, agency, and processes related to violence and conflict, and the opportunity MMR offers to influence a broader academic and policy audience. MMR can improve the accordance of theories and empirical studies with the complexities of social reality and enhance understanding of the causes, consequences, and potential remedies of violence and conflict.

## Keywords

violence, intrastate conflict, interstate conflict, structure, agency

The study of violence and conflict has been expanding in recent decades at all levels of analysis, from interpersonal violence to interstate warfare, concurrent with increasing methodological development and rising popularity of mixed methods research (MMR) across the social sciences. This article argues that MMR increases our leverage on complex puzzles in the study of violence and conflict and is likely to reward scholars who use this approach with valuable empirical insights that will aid in theory testing and development.

I present arguments for the utility of MMR in the study of different types of sociopolitical violence and conflict, and examples and critiques are provided of prominent existing mixed methods violence and conflict research, highlighting important lessons with regard to internal and external validity. I then offer a new typology of the presentation of evidence from different methods in MMR and discuss how MMR can increase the consumption and impact of research by appealing to audiences across methodological persuasions. Directions for future research are examined, such as increased incorporation of experimental evidence, vignettes, and formal models, and I consider potential difficulties in conducting MMR on the sensitive and complex subjects of violence and conflict. As we study the motivations and behaviors of violent individuals, groups, and states, it is beneficial to use all the methods at our disposal to understand violence and conflict and to work toward the normative goal of reducing the incidence of violence,

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and so the conclusion discusses how MMR can increase academic and policy leverage in these matters.

## Mixed Methods Research and Its Applicability to the Study of Violence and Conflict

As scholars across the social sciences have increased the use and philosophical consideration of MMR (e.g., Brewer & Hunter, 1989; Tashakkori & Teddlie, 2003, 2010; and earlier volumes of this journal), quantitative and qualitative methods have begun to be combined more frequently by political scientists and sociologists studying social and political violence and conflict.<sup>1</sup> Political scientists and economists have also mixed in formal models to create a “tripartite” methodology (Laitin, 2002). By “social and political violence” I mean physical violence organized and carried out by or among distinct social or political groups. Conflict refers to adversarial interactions between social and/or political groups or entities that may or may not result in physical violence; in this article the primary nonviolent interactions examined are those of *inter-state* conflict, in which the threat of violence may be present even when the act of violence is absent (e.g., some nonviolent “militarized interstate disputes,” or “MIDs,” in studies of international relations).

Mixed methods proponents have frequently adopted the philosophy (and research practice) of pragmatism,<sup>2</sup> “a philosophy rooted in common sense and dedicated to the transformation of culture, to the resolution of the conflicts that divide us” (Sleeper, 1986, in Maxcy, 2003, p. 54), thus approving of the use of the formulation or combination of research methods that best meet the needs of the research question and, by extension, of society. Sleeper’s depiction of pragmatism as seeking conflict resolution is especially fitting when used in the study of those conflicts that escalate to violence. Though there is debate over the ontological and epistemological depth of pragmatism as a foundation for MMR, and some would argue that it can be difficult (though not impossible) to reconcile the “cultures” of quantitative and qualitative research (e.g., Goertz & Mahoney, 2012), scholars have endeavored to flesh out pragmatism and how it both philosophically and methodologically lends itself to MMR (e.g., Biesta, 2010; Morgan, 2007; Onwuegbuzie, Johnson, & Collins, 2009). Pragmatism focuses on human decisions and actions in response to problematic situations, and the interaction when problems arise between habit and creativity (Gross, 2009, pp. 366-367), privileging empirical observation over assumptions, the “act of discovery over the justifications for knowledge” (Small, 2011, p. 62). Situations of conflict present individuals and groups with dilemmas that they must practically solve, based on structurally created habit or agentic creativity. As will be elaborated further below, MMR offers an opportunity to examine both elements of action, the structural and agentic, as well as examining not only observed actions but also their meaning (cf. Brandom, 2008).

This last point highlights the persistent problem of the relationship between structure and agency in the study of social action. Structure, the systems of social relations and systems of meaning (Hays, 1994) within which social action takes place, can be studied empirically using either quantitative or qualitative methods, though quantitative methods may render structure more legible. Within the framework of structure and shaped by structure, however, action results from the decisions of individual agents. To capture agents’ motives we must learn about the ideas and thought processes of agents, a task for which qualitative methods are often better suited—although experiments, which tend to produce quantitative data, may also help us get “inside the heads” of agents (e.g., Nisbett & Cohen, 1996). If we take the view of Giddens (1984) that structure and agency are in fact intertwined, with agents’ actions both shaped by and

producing structure, then mixed methods are ideally suited for examining this structure–agency interaction and achieving the Weberian goal of *Verstehen*, “making intelligible and thereby understanding the causes of events and phenomena generated by the social actions of individual subjective agents” (Oakley, 1997, p. 813). As McGovern (2011, p. 350) points out, micro-level studies suggest that “participants in violent politics [operate] according to rational and irrational choice models at once” (see also, Wood, 2003),<sup>3</sup> their actions shaped by external conditions and personal experiences or motivations and their actions then contributing to the generation of new structures. In studying violence, mixed methods capture the broader structural context and the agent’s motives, decisions, and interpretation in the perpetration or experience of a violent act. Though agency may be more difficult to locate at the macro level or to ascribe to collective actors (Collins, 1992), mixed methods can help illuminate the actions and thought processes of the individual actors who make up and lead collective organizations or build institutions.

The study of violence is also frequently divided between the micro level (individual and community-level experiences and processes) and the macro level (larger scale trends and patterns). While the micro level has traditionally been investigated using qualitative methods and the macro with quantitative, this has changed as better data have become available on violence at the individual and community levels. No matter which method is used at which level, though, a more complete understanding of violence results if we are able to integrate micro and macro explanations, and “the power of explanatory theory on either level will be enhanced if we can show their mutual penetration in a precise way” (Collins, 1987, p. 195). Varshney (2008, p. 353), introducing a journal issue on collective violence in Indonesia, emphasizes the need for both quantitative micro-level research and qualitative macro-historical research, concluding that “A more thorough explanation of Indonesian violence will clearly require both macro- and microexplanations.” The articles in the journal issue proceed to use quantitative methods to explain fine-grained, spatial variation, whereas qualitative methods are used to examine macro-level temporal variation and causal processes (see, Varshney, 2008, pp. 352-353); though Varshney’s introduction argues that the articles ultimately complement one another, the authors could have sought to synthesize their findings to join the macro- and micro-level explanations and create a more parsimonious understanding of collective violence in Indonesia. Bryman (1988, pp. 147-149) anticipated this need, suggesting MMR as a means of tying together the micro and macro levels. Using only one method, we may wind up with a myopic view of a research subject, one that either neglects processes of social interaction to the point of abstraction or, instead, fails to examine broader patterns that may permit generalization from the work (see Ragin, 1987, p. 69).

Violence, like all social action, is a complex phenomenon. In discussing his methods and sources in his micro-sociological book on violence, Randall Collins (2008) states,

My sources are very heterogeneous. This is as it should be. We need as many angles of vision as possible to bear on the phenomenon. Methodological purity is a big stumbling block to understanding, particularly for something as hard to get at as violence. (p. 32)

Beyond the usual problems of complexity, violence and conflict are issues of grave political and social importance, and academic contributions to their resolution can reduce human suffering. Thus those of us studying violence and conflict should make use of all appropriate methodological tools at our disposal to produce knowledge that may be used by policy makers and practitioners (see, Druckman, 2005, on conflict, and, more generally, Sartori, 2004). The next section examines studies of violence and conflict that have used quantitative and qualitative methods together, and what implications they may have for future research.

## **The Use of Mixed Methods in Studies of Violence and Conflict**

Scholars today are using mixed methods in studies of violence and conflict at all levels of organization. To show some the breadth of this scholarship and the potential of MMR to further improve our understanding of violence and conflict, I examine below some applications of mixed methods to the study of different forms of sociopolitical violence: communal violence, civil war, and interstate wars and crises.<sup>4</sup> The examples should provide a view of the wide range of topics to which mixed methods have been applied and may serve as potential models for scholars studying similar issues, as well as demonstrating possible pitfalls.<sup>5</sup>

### *Communal Violence*

New research has greatly expanded our knowledge of the dynamics of riots, as previous conceptions from crowd theory of “riotous crowds as an undifferentiated mass of individuals who adopt the identity of the crowd” have been largely discarded as scholars have recognized “the multiplicity of roles and persons involved in [riots]” (Brass, 2003, p. 29). The larger patterns of riots are discernible through statistical analysis, but the motivations and the process of riot “production” (Brass, 2003) have been studied through observation or interviewing participants.

Many contemporary studies of riots focus on Hindu–Muslim riots in India. Varshney (2002) conducted statistical analyses using a newspaper data set of the occurrence, location, and scale of Hindu–Muslim riots, and used the patterns uncovered to select six cities for paired historical case comparisons between riot-prone and less violent cities, an iteration of Lieberman’s (2005) nested analysis.<sup>6</sup> Varshney finds that the case studies support his theory of intercommunity linkages helping prevent riots, but he does so by ignoring one benefit of the nested approach: the examination of confounding variables. Possible confounding variables such as the intensity of nonviolent ethnic conflict and the extent of Hindu nationalist mobilization are insufficiently explored; thus, while Varshney demonstrates a correlation between interethnic ties and riot non-occurrence, convincing causal inference cannot be generated. Qualitative evidence could fill this hole, yet Varshney only uses qualitative evidence at the local level, failing to adequately connect local experiences to the national context. There is thus insufficient dialogue between the qualitative and quantitative data, and so the complementary qualitative evidence is not used to bridge the macro and micro levels, as Varshney (2008) later suggested should be done.

Outside India,<sup>7</sup> Scacco (2010) investigated how and why ordinary people participate in Christian–Muslim riots in the Nigerian cities of Kaduna and Jos. She argues that a lack of state protection in Nigeria creates a constant fear of attack by ethnic rivals, a fear more intense among the poor, who cannot afford private security measures and thus conclude that it would be better to strike preemptively than wait to be attacked. This willingness to riot is activated through informal social ties. Thus, two mechanisms account for riot participation: poverty-induced vulnerability and embeddedness in social networks. To test her theory, Scacco surveyed rioters and nonrioters and conducted interviews with riot participants and witnesses in Kaduna and Jos. Scacco first statistically tests her hypotheses about the association of poverty and social network membership with riot participation against alternative explanations from the literature; after confirming that the elements of this interaction mechanism were properly conceptualized and measured, establishing internal validity, Scacco conducts further statistical tests to see whether poverty and social networks interact as hypothesized. She then tests these findings against interview data to learn from rioters the process leading to their participation and to address alternative explanations. Thus, the more nuanced, detailed data generated in qualitative interviews is used to both illuminate the processes that surveys cannot capture and to confirm that the results of the statistical analyses are not spurious.

As a further test, Scacco uses national-level survey data to see if her theory also applies to measures of “violent demonstrations,” testing the external validity of her theory. This, though, is the weakest section of Scacco’s study. She considers her definition of a riot to be similar to, but different from, the measure of violent demonstrations, yet there is insufficient scrutiny of the distinction between these categories, and so it is impossible to know how many violent demonstrations would fit Scacco’s definition of a riot and vice versa. Furthermore, as Scacco acknowledges (p. 181), the national data do not permit examination of the effect of previous episodes of collective violence on subsequent participation, a factor controlled in her own study by the prior absence of religious riots in Jos and Kaduna. This is a problem of conceptual stretching (Sartori, 1970), in which the concept measured by one set of data does not match that measured by another set of data.<sup>8</sup> Though this is a problem across two sets of quantitative data, a qualitative comparison of incidents coded by Scacco as riots with incidents in the same regions coded in the national survey as violent demonstrations would have allowed Scacco to potentially clean the national-level data of incongruent events, preserving the internal validity of this micro–macro comparison.

Scacco and Varshney, despite the flaws in their work, have demonstrated the power of mixed quantitative and qualitative methods to expose patterns in the distribution of riots and the interactive processes through which riot directors and participants generate violence. There is, however, room for further methodological innovation, such as integrating formal models (Laitin, 2002) or experimental evidence with existing qualitative and quantitative observational data.

### Civil Wars

Studies of civil wars have been a growth industry in political science over the past two decades, and mixed methods studies have been increasingly common (see Checkel, 2008). In a mixed methods volume on civil war onset and outcomes, Collier, Hoeffler, and Sambanis (2005, p. 2) argue that “Quantitative and qualitative research designs are often (mistakenly) considered as substitutes rather than complements in political science” but that “there is much to learn by combining the two approaches.” Sambanis (2004) similarly argues that economic theories on civil war, which tend to be quantitatively based, would benefit from greater integration of qualitative evidence to add the elements of process and agency to the structural arguments of economic theories.

Three of the most influential recent studies of violence and participation in civil wars were carried out using diverse mixed methods designs. Wood (2003) sought to understand what drove *campesinos* (peasants) in El Salvador to join rebel movements and how these factors affected the dynamics of that country’s civil war. To give voice to the *campesinos*, Wood’s main data source is ethnographic interviews. Wood also conducted an innovative mapping exercise,<sup>9</sup> having *campesinos* draw maps of changes in land tenure and use, a qualitative spatial analysis provides a check on Wood’s theory and interpretation of observed changes. To test the generalizability of her theory and the processes uncovered through interviews, Wood supplements them using household survey, electoral, and cadastral data to see whether the statistics bear out her qualitative inferences, ensuring that her theory is applicable to all of El Salvador. Finally, to facilitate testing of her theory cross-nationally, Wood outlines a formal model of “high-risk collective action by subordinate social actors” (Wood, 2003, pp. 267-274). Using this tripartite approach (Laitin, 2002), Wood maintains her emphasis on *campesino* agency, while quantitatively testing her theory and qualitative inferences and establishing external validity, the latter a particular concern as Wood was unable to randomly select fieldwork areas. This combination of approaches not only increases confidence in the internal validity of Wood’s findings, it opens avenues for scholars of all methodological persuasions to engage

with Wood's work, increasing the study's potential impact in both the academic and policy realms.

Directly examining civil war violence, Kalyvas (2006) developed a game theoretical model that explains insurgent and incumbent targeting of civilians based on relative levels of territorial control. To test this "logic of violence," Kalyvas, working at the village level, used archival sources to construct a data set of incidents of violence in the Argolid region during the Greek civil war and drew on ethnographic evidence from interviews, local histories, and memoirs. These integrated quantitative and qualitative data allowed Kalyvas to examine both the patterns and processes of violence production in his region of study. To test the external validity of his theory within Greece, Kalyvas replicated his analysis using data from Almopia, a region as different as possible from the Argolid, and a national data set. With only qualitative data, there may have been concerns about the broader applicability of Kalyvas's findings. With only quantitative data, Kalyvas would have been unable to show empirically how the mechanisms of his theory work in practice. The one area where the study might potentially be improved is in testing the logic's cross-national generalizability. Kalyvas argues that the theory is general, and his extensive literature review provides qualitative cross-national evidence to support his theory, but as more cross-national data on the subnational dynamics of civil wars (e.g., Raleigh, Linke, Hegre, & Karlsen, 2010), have become available, it may now be possible to conduct a quantitative test too, which would provide more systematic and convincing evidence of the generalizability of the theory and findings beyond Greece.

Focusing solely on insurgent groups, Weinstein (2007) formulated an economic theory of what he terms the "industrial organization of violence" to explain why some rebel groups are indiscriminate in their violence against civilians, while others are selective. He argues that the character of rebel organizations is determined by their sources of financing and, contingent on this, how they recruit their members. Weinstein tests his theory through four mixed methods case studies of rebel groups in Mozambique, Peru, and Uganda. In the case studies, he integrates interview-based studies of the rebel groups and community-level social histories with statistical analysis of original newspaper data sets on patterns of violence in each of the conflicts. Weinstein uses the quantitative data to look at national-level patterns of violence, while the qualitative data enable him to explore subnational variation, tying together the micro and macro levels. To extend his analysis and establish the external validity of his study, Weinstein closes with a statistical analysis of cross-national data on battle deaths, attempting to manipulate it to provide accurate measures of the scale of civilian killing by rebel groups. While these data are less than ideal, Weinstein (2007) finds that "the macro-level relationships that they illuminate lend support to the overall argument" (p. 326), though he acknowledges that the closer case studies were necessary to assess causal mechanisms. Weinstein's analysis suffers from the omission of variables such as state strategy and group ideology (Tarrow, 2007, pp. 591) and the cross-national quantitative dependent variable (battle deaths) is not the same as the dependent variable in the individual case studies (violence against civilians more generally),<sup>10</sup> but it is undeniable that Weinstein is very effective in using quantitative and qualitative evidence to connect levels of analysis.

The aforementioned studies, along with those that do not use mixed methods, have greatly improved our understanding of the dynamics of civil war and violence in these wars. Much work remains, however, with Checkel (2008, p. 14) arguing that MMR can also bridge the divide between rationalist and constructivist theories of action in civil wars, a "double bridging exercise of methods and social theory" that will "generate richer theoretical accounts of civil war." As the works above also demonstrate, connecting the micro and macro levels in the study of civil war is possible, yet difficult, and requires great care (see also Balcells & Justino, 2014).

## *Interstate War and Conflict*

Mixed methods have been used by scholars testing two of the most important theories in international security studies: nuclear deterrence and democratic peace. In international relations research, formal models are common,<sup>11</sup> and these must be tested empirically through statistical analysis and/or case studies to demonstrate their verisimilitude. Quantitative methods tend to be used for examining cross-national and cross-case variation in interstate violence and conflict management by states and international organizations, whereas qualitative methods allow for process tracing, reveal the motivations and decisions of leaders, and permit textual interpretation of treaties and resolutions. Achen and Snidal (1989, pp. 168-169), examining the disconnect between comparative case studies and quantitative and formal theoretical work on deterrence theory, hold that “Case studies are an important complement to both theory-building and statistical investigation” as they let researchers “identify plausible causal variables, a task essential to theory construction and testing.” Similarly, Montgomery and Sagan (2009, p. 322), writing about quantitative studies of nuclear proliferation, argue that while “Some of the questions and debates in this subfield can only be fully tested when using statistical methods. Others will require mixed methods, combining historical case studies, deductive reasoning, and quantitative research.”

One mixed methods test of deterrence theory was Kapur’s (2007) analysis of the effects of nuclear weapons on the Indo-Pakistani conflict dyad. Deterrence theory suggests that nuclear armed states will avoid direct armed conflict with each other, yet Kapur argues that nuclear weapons have increased conventional Indo-Pakistani militarized disputes. Concentrating on statistical analysis and complementing it with comparative case studies of different periods of nuclearization, Kapur tests for an association between nuclearization and increased fighting and then uses process tracing (e.g., Bennett & Checkel, 2014; George & Bennett, 2005) to assess his causal logic. Kapur divides the India–Pakistan conflict dyad into three time periods with different levels of nuclearization, improving the internal validity of the study by increasing the number of observations (e.g., King, Keohane & Verba, 1994), while holding constant possible confounding variables.

After confirming his theory in the Indo-Pakistani cases, Kapur tests its external validity with a case study of China’s behavior in the 1969 Sino-Soviet Ussuri River conflict. Finally, to permit future evaluation of his theory, Kapur undertakes prospective case studies of how he would expect proliferation to affect the conflict behavior of North Korea and Iran. These extrapolations are the weakest point of Kapur’s study. The Ussuri conflict and prospective case studies do not account for a key element of the Indo-Pakistani dyad: symmetry of nuclear capabilities. This makes it difficult to map the lessons of the qualitative and quantitative study of this dyad onto the Ussuri conflict or potential cases, such as confrontations between Iran and Israel or North Korea and the United States, as these would pit newly nuclear states against established nuclear powers. This oversight highlights the importance of ensuring that key variables tested or conditions established with one method are considered when using another method,<sup>12</sup> and that concepts and measures are kept as similar as possible across methods (Ahram, 2009, 2013). Greater attention to these measurement issues would have preserved the internal validity of the cross-case and cross-method comparisons.

Democratic peace theory holds that democracies rarely go to war with one another, yet Mansfield and Snyder (2005) argue that countries that stall in the democratization process and possess weak institutions are actually more likely to go to war, especially if they hold enduring rivalries with other states. Using cross-national data on democracy and on interstate war, Mansfield and Snyder conduct statistical analyses to test their hypotheses about the association between democratizing states and war. Some of their hypothesized causal mechanisms (e.g.,

democratization, nationalism) are difficult to measure statistically, so Mansfield and Snyder turn to case studies of the democratizing states in their data set that initiated wars. Complementing the statistical analysis with case studies can help address problems of conceptual stretching (Sartori, 1970) that might arise from the coding of quantitative data (Goemans, 2007). Mansfield and Snyder, however, are not as careful as they should be about concept stretching, with stalled democratization on closer scrutiny referring to “regime collapse or return to autocracy” (McFaul, 2007, p. 164). Similarly to Kapur, a key variable is present in one method, but not the other, with exclusionary nationalism absent from the statistical analysis but present in the case studies. Subsequent replication of the statistical results also revealed that Mansfield and Snyder’s findings were driven by a small number of cases, and thus were not robust to the removal of these outliers (Narang & Nelson, 2009). This is another example of the rigor required in the use of each type of method in MMR. Had the findings been interpreted correctly, Mansfield and Snyder could have recalibrated their study to focus their case studies on the outliers, also avoiding the problem in their book of the qualitative evidence being spread thin by the attempt to examine such a wide range of cases. While mixing methods can result in more robust, generalizable, and accessible findings, it is important that each method used be given sufficient attention to ensure the robustness of findings generated with it, since a mixed methods study in which one or both components turns out to be invalid is less useful than an internally valid single-method study.

## Research Frameworks and Best Practices

In the studies reviewed above, various combinations and sequences of mixed methods were used. Mixed methods designs were implemented with varying success and varying degrees of correspondence between methods. This section outlines the specific frameworks that have been used in the write-up and presentation of mixed methods studies of the occurrence of and participation in conflict and violence, examines best practices for MMR, and presents possible directions for future mixed methods studies in this area. My goal is not to argue against or replace more systematic models of how MMR should be designed and data integrated (see, e.g., Creswell, Plano Clark, Gutmann, & Hanson, 2003; Greene, 2007; Morgan, 1998; Tashakkori & Teddlie, 1998), but instead to focus on how MMR findings are presented by authors and how this affects the consumption and impact of research.

I divide the presentation of mixed methods data into three categories: integrated, complementary, and supplementary (see Table 1). When methods are *integrated*, the findings of one method are interspersed and in dialogue with the findings of another. Where one method has been *complemented* by another, this means the findings of one method have been followed by those of another in the text. Complementary methods may be subdivided into *connected complementary*, when the presentation of findings from the second method consciously relates the findings to those of the first method, and *separated complementary*, when the different methodological strands are only brought together in the conclusion. A *supplementary* method is one that is given less emphasis and intellectual weight and that serves to provide an additional test or demonstration of the theory. In each of these types, evidence from one method can be used either to enhance evidence from another in an additive manner, adding additional weight to the scale in favor of a particular argument, or it can be used for confirmation, to test propositions generated using one method in order to confirm or disconfirm hypotheses (cf. Small, 2011, pp. 63-67).

Regardless of the sequence or emphasis of methods, it is important to ensure a dialogue between the methods and that each can contribute to addressing the theoretical problem or research question. Otherwise, the study should be split into its component parts as separate

**Table 1.** Mixed Methods Research Designs in Studies of Violence and Conflict.

Collective violence	<ul style="list-style-type: none"> <li>• Large-<i>n</i> data analysis complemented separately by integrated micro-level case studies and secondary evidence (Varshney 2002; Wilkinson, 2004)</li> <li>• Close qualitative case study and interviews integrated with (supplementary) statistical correlations (Brass, 2003)</li> <li>• Micro-level quantitative analysis with integrated complementary qualitative interviews and supplemented by meso-level quantitative test of generalizability (Scacco, 2010)</li> <li>• Statistical and spatial analysis at multiple geographical levels with connected complementary qualitative field surveys and interviews (Veeraratne, 2009)</li> </ul>
Civil war	<ul style="list-style-type: none"> <li>• Formal model followed by connected complementary micro-level statistical and qualitative interview and local narrative evidence (Kalyvas, 2006)</li> <li>• Integrated ethnographic interviews, mapping exercise, and case studies with integrated supplementary statistical evidence and supplemented with a formal model for generalizability (Wood, 2003)</li> <li>• Ethnographic interviews and case studies with integrated complementary national-level statistical analysis and supplemented by cross-national statistical analysis to test generalizability (Weinstein, 2007)</li> <li>• Cross-national statistical analysis with connected and separated complementary case studies (Collier &amp; Sambanis, 2005; Fearon &amp; Laitin, 2008)</li> </ul>
International conflict	<ul style="list-style-type: none"> <li>• Disaggregated single-dyad quantitative analysis with separated complementary qualitative interviews and case studies (Kapur, 2007)</li> <li>• Cross-national statistical analysis with separated complementary qualitative case studies (Mansfield &amp; Snyder, 2005)</li> </ul>

studies. A mixed methods study, however, offers the opportunity to explore together different aspects of a phenomenon, offering a more complete picture of the context within which social actions occur and the reasons why they are carried out. If there is contradiction between methods within a study, this should lead to a reexamination of the data and analyses, providing necessary scrutiny of matters that would have been missed with a single-method approach. As will be elaborated further below in the “Stumbling Blocks and Limitations of Mixed Methods Research” section, researchers must take care to avoid conceptual stretching by ensuring that concepts and measures remain consistent across methods, or that divergences are explicitly stated and addressed. Mixing methods also increases the likelihood that readers will branch out beyond their own methodological persuasions to consume and engage with research that uses other methods—a quantitatively oriented scholar may be unlikely to read a purely qualitative article, but she will be more likely to read and cite an MMR article integrating both methods. Theories that seem complex or inaccessible when tested using only one method may be rendered legible to a broader audience through the use of multiple methods, opening new avenues for cross-method and interdisciplinary crossover and potentially collaborations. Given the pressing policy implications of the study of violence and conflict, collective research agendas and accessibility of theories and findings should be a priority.<sup>13</sup>

## New Directions for Research

Researchers have begun using mixed methods more frequently to study violence and conflict, but there remain many possibilities to expand the methodological scope of these studies.<sup>14</sup> In the study of civil wars, there have been a growing number of micro-level field experiments and quantitative program evaluations in postconflict settings, for example the work of many researchers associated with the Abu Latif Jameel Poverty Action Lab or the Households in

Conflict Network.<sup>15</sup> Blattman and Miguel (2010) argue that the generalizability of findings from these micro-level studies may best be established by increasing the overall number of such studies in diverse settings. It may also be possible, however, to supplement the quantitative findings with qualitative case studies of similar experiments elsewhere to examine similarities and differences in their designs and results. Studies of international conflict may benefit from increased use of interviews to examine strategic decision making by military and political leaders, or using Laitin's (2002) tripartite approach and combining formal models, quantitative, and qualitative methods. Large-*n* quantitative studies of all types of violence may benefit from qualitative studies of negative cases, where violence might have been predicted by the statistical model, but did not occur. There is also a great opportunity to use qualitative methods to improve quantitative measures (e.g., Luyt, 2012) and to use qualitative evidence within a statistical framework to improve measurement and causal inference (Glynn & Ichino, 2015), both acting to ensure the internal validity of quantitative studies, or to use quantitative analyses to select cases for qualitative study (Abadie, Diamond, & Hainmueller, 2015; Lieberman, 2005), ensuring the consistency of the qualitative case studies with the research goals.

Many of the studies examined above use quantitative methods to examine macro-level, structural factors and qualitative methods to uncover micro-level processes, but it may also be possible for these roles to be reversed (cf. Varshney, 2008), given the trend toward greater use of micro-level surveys in political science, with qualitative narratives providing structural context for micro-level quantitative evidence on attitudes and decisions (e.g., Humphreys & Weinstein, 2008). Micro-level surveys and experiments, however, are likely to be better at examining the propensity for violence by individuals or groups (e.g., Nisbett & Cohen, 1996) and effects of violence on them (Bakke, Cao, O'Loughlin, & Ward, 2009; Blattman, 2009; Fearon, Humphreys, & Weinstein, 2009), than at explaining the commission or processes of violence itself, a task for which ethnographic, interview, or focus group-based qualitative research is better suited. A recent special journal issue (Balcells & Justino, 2014) explicitly attempting to bridge the micro and macro levels in the study of civil wars and communal violence, however, contained articles that almost exclusively used only one method,<sup>16</sup> providing valuable structural evidence at different levels of analysis, but largely ignoring questions of individual or collective agency. There also remains room for further methodological mixing across the spectrum of violence and conflict, with combinations of methods and approaches applied at one level of violence and conflict (e.g., communal violence) used and tested in studies at another level (e.g., interstate war).

Laitin (2002) raises the question of why we do not see more formal models of riot production, observing that "Brilliant expositions of communal violence . . . are presented as if formalization would provide no further insight. Yet more attention to the strategy space of rioters may help determine the conditions under which riot professionals will do their professional thing" (p. 650). Qualitative or quantitative cross-national comparisons of the dynamics of rioting could also be combined with micro-level evidence to provide a more general theory of riot production and participation.

In the study of any type of violence and conflict, formal models may prove useful in providing a clear specification of the relevant actors, preferences, incentives, and payoffs in a situation. Calculations can be made of the expected payoffs to actors given certain conditions, thus providing predictions for how they would be expected to act. While formal models are associated primarily with rationalists, models can extend beyond material rationality to noneconomic goals and preferences (Petersen, 2001; Wood, 2003) and can explicitly account for uncertainty, potentially allaying some of the fears that formal models and pragmatism are necessarily incompatible. Formal models are by definition abstract, but they can be used in a mixed methods study in two ways: a formal theory can be developed that is then tested with qualitative and/or

quantitative evidence (e.g., Kalyvas, 2006; Rocco & Ballo, 2007) or a theory generated through qualitative and/or quantitative analyses can be formalized to facilitate more general testing, such as Wood (2003) formalizing her theory to help facilitate testing it outside the Salvadoran context. If a formal model is developed first and the goal is then to test the theory, one very logical means of testing would be through case studies using process tracing. New work on process tracing suggests laying out clear hypotheses and expectations and examining their applicability or inapplicability at different points in time within a case (Bennett & Checkel, 2014), and a formal model would make it very easy to specify the expected behavior of actors given the constraints and opportunities they face. A case study based on the secondary literature can provide support for a formal theory (e.g., Rocco & Ballo, 2007), but to be most convincing about the operations of mechanisms in a formal theory, a case study would also draw on interview or archival evidence to provide primary evidence about actors' motives and decision-making process.

Across the different types of political and social violence, there is a need to explore norms and attitudes about violence and among violent (and nonviolent) actors. Blattman and Miguel (2010, p. 47) suggest accomplishing this task through field experiments, but it may also be achieved using vignettes, "short stories about hypothetical characters in specified circumstances, to whose situation the interviewee is invited to respond" (Finch, 1987, p. 105). Vignettes can be quantitative or qualitative, administered in a survey or interview. We can conduct mixed methods studies with quantitative and qualitative vignettes to allow for both statistical testing and open-ended responses, and to see if responses vary across methods.<sup>17</sup> Combined with data on personal experiences and actions, vignettes may help us better understand and bridge the attitude-behavior divide. New techniques may also be helpful in reviewing and synthesizing existing qualitative, quantitative, and mixed methods studies of violence and conflict in a novel type of meta-analysis (see Sandelowski, Voils, Leeman, & Crandell, 2012).

## **Stumbling Blocks and the Limitations of Mixed Methods Research**

Mixing methods is not a panacea. The appropriate choice of methods depends on the nature of the inquiry. Quantitative research appears more useful for capturing patterns in the variation of violence and conflict and understanding its distribution and correlates. Qualitative research appears more useful for understanding motivations, experiences of violence and their psychosocial effects, or capturing the processes of violent and conflictual situations. Given these different strengths, it is important when using mixed methods to be clear in defining the concepts and variables that each method is capturing. As the problems with variable specification and measurement in several studies above demonstrated, qualitative and quantitative data may be capturing different aspects of a phenomenon, depending on how measures are constructed or questions are phrased. This distinction does not mean, though, that the evidence presented about these slightly different, but related variables should not be integrated in the presentation of findings, for the qualitative and quantitative evidence together provide a clearer picture of the social reality of the population being studied, but researchers should be clear about the potential differences between what each method is measuring. Following this line of argument, Ahram (2009, p. 6) cautions us to view mixed methods as only "complementary, rather than corroborating," if concepts are being stretched across methods.

Conducting an MMR study is more difficult, time-consuming, and costly than a single-method study. It requires familiarity with the tools and methods of both qualitative and quantitative research to conduct each component of the study in a rigorous manner, or the formation of a research team in which quantitative and qualitative experts' skills may complement each other (though such a team has potential for disagreements between methodological partisans). Additionally, despite the increasing employment of mixed methods and past calls for the

integration of quantitative and qualitative research, some scholars will always believe in the primacy of one method over others. Publication of MMR may be more difficult in journals or with presses whose editors and reviewers have a strong preference for a particular method, and it can be difficult to keep MMR analysis below journal word limits while giving each method its due.<sup>18</sup>

Finally, there are particular problems that may affect the conduct of MMR on a sensitive subject like violence. Quantitative analysis of existing data sets or secondary literature-based case studies are safe, but researchers gathering new qualitative or quantitative evidence must deal with dangers to themselves and subjects when conducting fieldwork in violent areas (see, e.g., Nordstrom & Robben, 1995). As more researchers examine violence at the micro level, continued engagement with ethical concerns should lead to new approaches to maintain subject confidentiality, such as Scacco's (2010, pp. 71-72) multiple safeguards for informants. Brewer and Hunter (1989, p. 14) caution of the potential for MMR to compromise confidentiality by "identify[ing] and combin[ing] a variety of discrete data points from different methods, thereby linking information about individuals and groups that could not be linked if the methods were used separately," so mixed methods researchers should take great care in ensuring that their qualitative and quantitative data are structured to prevent exposure of subjects.

## **Conclusion**

Greater use of MMR has the potential to make important contributions to the study of violence and conflict. As noted by Collins (2008) and others, violence is too complex and pressing a social problem to be subjected to methodological puritanism. We should take from the range of methodological tools those that may best be applied to our research questions and mix them as seems appropriate. To keep quantitative, qualitative, and formal methods strictly separate is to limit ourselves and to reduce the potential impact of studies on such a critical subject. As Tarrow (1995) admonishes, "a single-minded adherence to either quantitative or qualitative approaches straightjackets scientific progress" (p. 474).

I do not wish to diminish the contribution that single-method studies can continue to make to studies of violence, conflict, and other subjects,<sup>19</sup> but a key concern is that work conducted with one set of methods be in dialogue with that conducted with another set of methods. Until, more single-method scholars make use of previous findings from other methodological approaches and present the results of their own research so that they are relevant to and testable by scholars of the other methodological orientation, there remains a need for MMR to bridge the methodological divide and to better help us untangle the web of structures, motives, and decisions that lead to violence and conflict.

MMR provides checks and balances in the generation and testing of hypotheses and requires a useful interrogation of the differences that arise between theories and findings generated with different methods. Taking a neutral stance on the primacy of structure or agency allows one to maintain the agency of subjects and to take seriously their lived experiences and the meanings they find in action, and the processes through which actions occur, while also more clearly delineating the prevalence and patterns of phenomena and how they are shaped by structural variables. Mixing quantitative and qualitative methods promises to lead us beyond the abilities of one method alone by providing a more holistic view of the phenomena we study, of patterns and processes, effects and causes. This fuller view is extremely helpful (though not necessary) for the production of theories that more accurately explain social phenomena. The formulation of theories is a central goal of social science (Durkheim, 1895/1964; Geddes, 2003; George & Bennett, 2005; King, Keohane, & Verba, 1994; Weber, 1922/1978).<sup>20</sup> As Geddes (2003) eloquently states, however, "To be successful, social science must steer a careful course between the Scylla of lovely but untested theory and Charybdis, the maelstrom of information

unstructured by theory” (p. 4). Mixed methods provides necessary empirical grounding for theory generation and data for theory testing that can be convincing to and replicable by researchers of any orientation, making the work more accessible and impactful.

From these tested theories and empirical evidence, formed by the combination of best practices in research methods, we may formulate ideas for the prevention, management, and resolution of violence and conflict. Political science and sociology, as fields open to the use of quantitative, qualitative, and formal methods, are uniquely suited for uniting and testing different strands of research and theory on violence and conflict. In his critique of recent development economics research, the anthropologist Mike McGovern (2011, p. 353) writes that while “one productive division of labor would have economists identifying the surprising correlations in cross-cultural economic phenomena and anthropologists explaining them, political scientists may be able to do both parts of this process in house,” as can sociologists.

Through the ability of each research method to fill in the gaps in knowledge left by the others, mixed methods studies of violence and conflict give us as social scientists the opportunity to conduct research that both satisfies the criteria of social scientific inquiry and provides more useful and complete information for policy makers and practitioners.

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### Notes

1. See Small (2011) for a more general review of MMR in sociology.
2. For a deeper philosophical/epistemological analysis of MMR, see Onwuegbuzie and Leech (2005) and Morgan (2007). See, for example, Joas (1993), Whitford (2002), and Gross (2009) on applying pragmatism to sociological analysis. Political scientists who endorse MMR seldom acknowledge the *philosophy* of pragmatism (see Brady & Collier, 2004; Fearon & Laitin, 2008; King et al., 1994), but they agree on the commensurability of quantitative and qualitative methods and the need to bring these approaches together, a stance similar to that of the philosophical pragmatists, and these political scientists frequently discuss pragmatism in research in practical terms.

3. Blattman and Miguel (2010, pp. 14-15) argue that nonmaterial motivations can be included in rational models “as ‘goods’ of inherent value that individuals consume by fighting.”
4. For a mixed methods study of military coups, see Maniruzzaman (1992); on revolutions, see Paige (1975) and Goldstone (1991).
5. It should be noted that my discussion of these mixed methods studies uses a more positivistic, rationalistic framework in the examination of variables, sampling, internal and external validity, and so on (cf. King et al., 1994), though within a mixed methods study a different ontological and epistemological emphasis may be adopted depending on the goals of the study (see Tashakkori & Teddlie, 2010, for more detailed arguments and debates).
6. Brass (2003) and Wilkinson (2004) provide other mixed methods studies of Indian riots. For a critique of the nested analysis strategy, see Rohlfing (2008).
7. For another mixed methods study outside India, see Weeraratne’s (2009) dissertation on anti-Chinese riots in Indonesia.
8. See Ahram (2009, 2013) on problems of conceptual stretching across methods in MMR.
9. Petersen (2001) conducted a similar mapping exercise.
10. Another example of conceptual stretching of variables across methods (Ahram 2009, 2013).
11. See Brown, Lynn-Jones, and Miller (2000) for a debate on the role of formal models in international security studies.
12. In this book, it is not necessarily a problem of conceptual stretching or measurement issues across qualitative and quantitative components of the study, but instead between the levels of within-case and cross-case comparison.
13. See Avey and Desch (2014) on the types of studies national security policy makers in the United States find accessible and useful.
14. See the special journal issue edited by Boyle (2012) for a more general review of research agendas’ progress and potential in the study of political violence and conflict.
15. See <http://www.povertyactionlab.org> and <http://www.hicn.org>
16. The exception, McLauchlin’s (2014) article on desertion in the Spanish Civil War, uses qualitative evidence in a supplementary matter, briefly providing “suggestive” evidence from individual accounts gathered from previously published works to support the core statistical findings.
17. See Thaler (2012) for a study using qualitative and quantitative vignettes in a connected complementary manner.
18. See also Bryman (2007) on these general difficulties.
19. See Slater and Ziblat (2013) for a recent defense of qualitative comparative case studies in political science.
20. See Hirschman (1970) for a critique of the centrality of theory in social science.

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