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Armed Group Repertoires and Recollection in Survey Research

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1 Introduction

Studies of civil wars often allude to the potential for problems of memory to mar observational data collected through surveys. The validity of survey respondents' recollections is a particular concern for the field of civil war studies given the trend towards micro-level research. Researchers making use of in-depth interviews might be able to assess the accuracy of respondents' memories on a case by case basis. But no such tool seems readily available when collecting systematic data through survey research. As Arjona (2010: 398) notes, when it comes to conflict, the dilemma is that even when researchers fully understand the distorting effects of memory, there may simply be no source of information on events and behavior of interest other than survey or interview respondents. How, then, can researchers defend the validity of inferences based on retrospective survey data on conflict? To what extent do such data create insurmountable challenges to inference?

Although many scholars are quick to challenge results based on retrospective data, to the best of my knowledge there has not been an effort to systematically understand its validity in the context of research on conflict. At the same time, a vast body of research exists spanning multiple disciplines which tackles issues of retrospective reports in survey research. In this memo, I highlight two areas of concern specific to retrospective survey data on conflict, and in particular, on studies investigating armed group repertoires – the effects of trauma on recall and intentional distortion of responses for political purposes – and discuss their consequences for causal inference. Section 2 summarizes existing concerns about memory and conflict prevalent in literature in the social sciences. I define armed group repertoires, and single out the effects of trauma and political distortion as main potential sources of bias for research dealing with them. Due to the dearth of systematic research on problems of recollection and the experience of conflict, in Section 3 I review relevant findings in in epidemiology, medicine, psychology, and sociology. Based on these literatures Section 4 sets lays out two potential areas for future research to address more fully – a more nuanced concept of trauma and its effects on retrospective recall, and specific accounting of potential of systematic differences in reporting of explanatory variables (versus their true values) due to differences in civil war experiences across respondents.

2 Memory and Conflict as Understood in the Social Sciences

Studies of conflict and political violence which gather observational data tend to view memory through either a cognitive or strategic lens. According to the former, cognitive processes limit respondents' ability to accurately inform the researcher about the experience (or characteristic) in question. According to the latter, self-regarding concerns as well as the respondent's desire to manipulate external perceptions or judgments result in intentionally misleading responses.[2]

2.1 Cognitive and Strategic Challenges to the Validity of Survey Responses

Cognitive challenges arise due principally to the passage of time and to trauma. The greater the elapsed time between event and a researcher's data collection effort, the more likely it is that respondents will simply be unable to access memories, will lose details of those memories, or will construct false memories based on attempts to fill in those gaps (usually by using existing narratives about the events in question – whether public narratives or private ones drawn from family or circles of friends and acquaintances). Trauma, on the either hand, might lead to the repression of memories or a lack of willingness to report them to the interviewer.

Strategic challenges arise due to the interaction between factors specific to the war and a respondent's place within the context of war events, on the one hand, and the relationship between respondent and researcher or respondent and a prospective audience on the other. For example, respondents may withhold information that they believe would result in the interviewer or, more generally, the public, evaluating them negatively. This is a common form of bias in survey responses known as social desirability bias. A more complex type of bias could arise if respondents wish to convey a narrative about the conflict which support their own political agenda. Here, events might systematically go unreported, or might be systematically made up.

[2] Self-deception may not be as deliberate as attempts to influence outside perceptions, but we can still understand it as subconsciously intentional.

Some researchers appear only to have in mind cognitive issues, particularly memory loss, when considering potential problems with participant-reported data on conflict. In their study of combatant abuse of civilians in Sierra Leone, for example, Humphreys and Weinstein (2010:45) note that "The ability of respondents to recall events in the past is obviously an issue of concern in the implementation of surveys." They conceptualize memory-based threats to the validity of their data only along the lines of information loss. Thus, "We minimize the potential error that arises from memory issues by asking respondents to describe patterns of behavior in their faction during *one* specific period of the fighting, randomly chosen but linked to a high profile and memorable event during the war." In a related article on participation in armed groups in Sierra Leone, Humphreys and Weinstein persist in the relatively narrow portrayal of memory problems in conflict research as centering on cognitive information loss. Noting that temporal dynamics of mobilization may be more empirically relevant than any static portrayal of recruitment, they characterize the main difficulty in examining those dynamics through the retrospective reports of participants as the "considerable strain [placed] on the memory of respondents" (453).

2.2 Armed Group Repertoires

If a survey deals mainly with characteristics of individuals and households (e.g. socioeconomic status, age, wealth, casualties due to the war), concerns about cognitive and strategic challenges to the accuracy of survey responses might be minimized. But questions that ask respondents to report the behavior of armed groups – particularly armed group repertoires – would may be particularly susceptible to the problems of inaccuracy discussed above.

Suppose that a respondent is asked to report whether any member of her immediate family was killed as a result of the conflict. Although an extremely traumatic event, it is unlikely that a respondent would unknowingly repress such a memory. Although a respondent might have strategic reasons to attribute the death to a particular armed group or even to misrepresent the death as conflict-related, it is difficult to imagine that strategic reasons

could exist to suppress reporting the death entirely. Therefore, for many classes of characteristics or events, as long as the questionnaire asks about factual occurrences rather than interpretations – i.e. whether the death of an immediate family member occurred as a result of the conflict rather than identifying the perpetrator – strategic and cognitive challenges to accuracy may be greatly reduced.

In contrast, questions about armed group behavior, especially repertoires of action and violence (see Tilly 1978, Wood 2008),[3] seem more likely to be susceptible to biased recall for cognitive reasons, including the influence of trauma, and for strategic reasons. With respect to trauma, this susceptibility stems from the level of detail requested from respondents. Respondents may be asked to report the frequency of a fairly wide range of actions that armed groups undertake, in other words, to provide a detailed account of actions during the war. How often, for example, did the group patrol? Use selective violence against civilians? Clash with the enemy?

With respect to strategic misrepresentations, the particular susceptibility to inaccuracy with respect to armed group repertoires stems from the fact that implicit in an accounting of repertoires of action is the attribution of responsibility for wartime actions. By detailing the activities of armed groups, a respondent provides information that has the potential to confirm existing (politicized) narratives about the war, contradict those narratives directly (and therefore side with their opponents), or describe an alternative narrative. Regardless of whether a respondent intends it to be so, the elaboration who did what to whom, and when, in the war is a necessarily political account because it can be construed as such in the present.

3 Research on Retrospective Data

Before turning, in Section 4, to a discussion of the likely impact of trauma and strategic political distortion on responses to survey questions about armed group repertoires I first provide a brief overview of the basic aspects of retrospective data as understood in

[3] Wood defines repertoires as the "set of practices that a group routinely engages in as it makes claims on other political or social actors."

literature in epidemiology, medicine, psychology and sociology. In particular, I highlight three sets of findings: how recall is thought to function in survey responses; the impact of trauma on recall; and the possibility of systematic variation in the quality of recall according to individual-level characteristics.

Research in psychology and cognitive science provides a window into the psychological processes through which survey respondents attempt to access information and subsequently present it to the interviewer (see Schwarz and Sudman 1994 for detailed treatments of many of the issues raised below). Bradburn et. al. (1987) summarize two sets of processes that affect survey responses. First, respondents, "encode and interpret survey questions; they place the questions in the context of their general knowledge and their knowledge of the survey's subject matter." This level of the process of recall may influence responses and bias them due to respondents' assessment of the expectations of the interview and, more generally, perceptions about how society evaluates the behavior or characteristic in question (social desirability bias). Such influences can be reduced through careful design of survey instruments and interview protocols.

A second, more basic level of factors, influences the process of recall: "retrieval and inference." For respondents to generate a "single-valued" answer to questions about timing and frequency of events, they must both attempt to access relevant memory (retrieval) and make inferences based on that memory. Schwarz identifies essentially the same process as being at work in reporting about behavior – "means and estimation" (282-3). The processes of retrieval and inference can generate inaccurate responses through at least seven mechanisms, drawn from Bradburn et. al. 1987 and Schwarz 2007: decomposition, the availability heuristic, lay interpretations of how memory functions, normative expectations, interpolation, telescoping, and modified understandings of the meaning of questions due to pragmatism.

First, rather than attempting to recall the answer in and of itself, respondents "decompose" the question into component parts. Thus respondents typically provide the answer to a question about the frequency of an event occurred by determining the rate at which the event occurred for a smaller period of time and then scaling up to the entire period under consideration. While such a mental technique might actually improve the accuracy of responses, there is also the potential for it to result in answers that systematically over-

estimate the frequency of the event. Second, respondents tend to use an "availability heuristic." If it is difficult access information about an event, respondents conclude – and therefore answer – that it was less frequent, or even less likely to have occurred at all. The inaccuracy induced by this heuristic is exacerbated if respondents are given little time to process information related to the question in advance. Third, and related to this, respondents' sense of how memory functions is also often used to determine answers. If respondents believe that events which didn't happen, occurred in the distant past, or seldom occurred multiple times are difficult to remember, their answers concerning these three aspects of an event (occurrence, time elapsed, and frequency) are liable to be based purely on the ease with which they can recall the event. While Bradburn et. al. note that "such inferences are often correct," inaccuracy can arise "in part because the lay explanations are incomplete or misleading accounts of memory dynamics."

Fourth, respondents use "normative expectations" about events to infer their frequency. If an event is supposed to occur at a certain rate, respondents provide an answer based on their judgment of how much the frequency of their experience of the event has diverged from the "normative" rate, rather than attempting to access the "true" frequency. Fifth, respondents use interpolation to provide an answer within plausible bounds. Suppose, for example, that a respondent were put in a windowless room for a period of several days with no clocks, and then asked to report the number of hours she slept per night. A plausible answer can only be between 0 and 24, and so a respondent with no other means of determining the answer is likely to select a value by interpolating between the two (or some numbers other than 0 and 24 that are deemed the minimum and maximum plausible number of hours of sleep). Sixth, when asked to place events in time, respondents may "mistakenly import" events from a different period into the one in question. Here, lay interpretations of memory may play a role. A respondent may attribute an event to a more distant or recent time period according to the level of detail with which she can recall it.

Seventh, Schwarz notes the presence of something akin to the "availability heuristic" as an influence on respondents' interpretations of survey questions. If respondents believe that a specific type of behavior is unlikely to have occurred during a relatively short reporting period in question, often when the type of behavior is not fully described in the questionnaire, they often revise their understanding of what qualifies as belonging to the category, and report similar but less salient behavior that did occur (even if it doesn't fit the original meaning). Conversely, when respondents believe that a type of less salient

behavior might be too difficult to remember for a relatively longer reporting period, they revise their understanding of the type of behavior and report less frequent and more visible types of the behavior. Schwarz refers to these combined processes as "shift[s] in the inferred pragmatic meaning of the question" (283). Their consequence is that when reference periods that differ in length are used, differences in reported frequencies may be due not only to the process of memory and forgetting itself, but also to respondents' efforts to interpret the question. In particular, the use of shorter periods tends to result in reports of higher frequencies of occurrence as compared to the use of longer periods.

Finally, in addition to enumerating the possible threats to accuracy inherent the psychological processes used by survey respondents, Bradburn et. al. also note two facets of memory that are likely to improve accuracy: the effect of salient personal experiences or high-visibility public events, and the "autobiographical sequence" as a core structure of memory. Since experiences that are "emotional or important" to respondents are recalled vividly, as are some public events, respondents may be able to access information about the time period in question, even if unrelated to the vivid experience or event. In addition, memories may often be grouped in a sequence according to the experience in question, rather than accessible linearly according to a timeline. Respondents may therefore be able to recall minor or infrequent events, or details of an experience, if asked about them in the context of a category of events to which they belong. Thus, a respondent might not be able to provide an accurate answer if asked a single question about whether she ate at a Japanese restaurant during a business trip one year ago. But if she were questioned about her leisure activities and dining experiences more broadly, the memory of this particular event would become accessible in the course of recalling the sequence of events involved in the trip. Less trivial categories for the purposes of research on conflict would include examining sequences of political events or family events.

Research in epidemiology and psychology illuminates some of the possible effects of trauma on recall. Widom and Shepard (1996) find that in generally respondents provide consistent reports of traumatic experiences – in this case, physical abuse during childhood – between a contemporaneous interview and one almost twenty years later. At the same time, most report a higher incidence of traumatic events in the later interview. Hepp et. al. (2006) find a similar effect on increased reporting of traumatic events, but over a much shorter time-span. In addition, Hepp et. al conclude that respondents recall violent events more readily than non-violent ones, and "especially when [the event] was associated with

intense fear and helplessness, and when it was followed by PTSD symptoms." At the same time, the study also finds that trauma may have uneven effects on recall across respondents. The authors speculate that "Repression of [trauma], dissociation and recollection of lost memories may play a role, especially in severe trauma." Presumably the extent to which memory is subject to these influences may vary across respondents. Indeed, Salovey et. al. (1989) find that respondents' mood while answering a questionnaire influences their retrospective evaluation of experience.

Research in epidemiology also emphasizes a key difference between two types of threats to accuracy based on retrospective recall, which is also reflected in the econometric literature. On the one hand, the process of recall and effects of trauma discussed above may generate responses which are inaccurate but do not diverge from the "truth" in any systematic way according to the characteristics of respondents. This corresponds to classical measurement error, with its corresponding effects on causal inference. Here, it should be noted that classical measurement error in even one explanatory variable in a multivariate setting is sufficient to produce estimates of the coefficients for all the other explanatory variables which are biased in unknown directions (Greene 2003:84-6). In other words, attenuation bias in the coefficient for the particular explanatory variable which has the measurement error is the least problematic of the consequences of measurement error in a multivariate setting; at the same time, the effects on the other coefficient estimates are frequently glossed over by researchers.

On the other hand, differences in the accuracy of recall can vary systematically across respondents not only according to individual characteristics (location, age, sex, political affiliation, socioeconomic status, and so on) but also exposure to the outcome being studied (Coughlin 1990). Here, the tendency is often for respondents who have experienced the outcome in question to be able to provide systematically more information concerning potential correlates of the outcome than respondents who did not experience it. This systematic variation in the accuracy of recall is problematic for causal inference even if we focus myopically on the consequences for the estimated coefficient of one variable that has this "differential" measurement error. In such a scenario, the relationship between the explanatory variable of interest and the dependent variable may be spurious (see Bound et. al. 2001). While the nature of systematic variation in recall due to individual characteristics may be more easily determined, the nature of this variation due in particular to exposure to the event it question is more difficult to ascertain (Coughlin 1990).

4 Trauma, Strategic Political Distortion, and Studying Armed Group Repertoires

To return to the question of the potential biases of research which deals with armed group repertoires in civil wars using retrospective survey data, what does the literature discussed above imply about the especially salient problems of bias due to the influence of trauma and strategic political distortion? Two preliminary lessons are apparent. First, there is a need for a more nuanced treatment of the effects of trauma on recall in civil war settings. Second, researchers must attempt to establish the extent to which the use of retrospective surveys to construct explanatory variables such as those capturing armed group repertoires may introduce systematic inaccuracies into these variables.

Trauma tends to be understood in very broad terms in research on civil wars. The experience of widespread violence and the transformation of social life wrought by violence clearly has a profound impact on respondents. At the same time, many researchers have discovered that respondents are eager to discuss their life during a time of civil war, and may even find the experience cathartic. Focusing on the profound impact of trauma in civil war leads the researcher to suspect that retrospective data may be subject to inaccuracies due to repressed memories or an unwillingness on the part of respondents to give voice to those memories. But focusing on the catharsis of the interview process leads researchers to expect that in fact recall of experience during civil war may be quite accurate since trauma can increase the vividness both of memories of violence and associated or overlapping experiences, even quotidian ones.

The literature on retrospective recall discussed above suggests that the concept of trauma in civil wars can be usefully developed further. Results in the empirical literature may in fact be mixed on the question of whether trauma facilitates recall, reflecting the two poles of the characterization of trauma in much of existing research on conflict. Even as the studies by Widom and Shepard (1996) and Hepp et. al. (2006) suggest that trauma may create fewer inaccuracies in retrospective data than many researchers would suspect, other studies come to the opposite conclusion. Blane (1996) argues against the idea that vividness of traumatic events facilitates accurate recall:

> "Emotionally laden events are least likely to be recalled accurately…The emotional load carried by an event may also be important to memory over…longer periods of time…Contemporaneous records…often differ from present day accounts of the same events by the same individuals particularly when the events being recalled were traumatic, such as a bombing raid. Conversely, hum-drum events which carry little emotional charge and the barely noticed background routines of life appear to be recalled most accurately."

The more nuanced conception I have in mind would address additional aspects of trauma other than the repression/vivid recall debate. For example, to what extent might memories of behavior and experience during civil war be readily accessible to respondents due to the survival pressure that exists during conflict? Nairne et. al. (2007) show that survival-related terms are more easily recalled by subjects in a laboratory than other terms. Clearly there is a large gap to bridge between this and the conclusion that memory of traumatic civil war events might be accessible and accurate due to such a pathway. But beginning to discuss such possibilities and to investigate them further seems a worthwhile undertaking.

The political dimension of retrospective survey data on civil wars is another aspect of such research that easily springs to mind for most researchers in this field, but which is also not well-incorporated into existing research. All survey research on civil wars takes place within a context of a prevalent political narrative about the war in question. Given potential subnational variation in this narrative – even variation according to the political affiliation of individuals rather than geography – when might respondents systematically under or over-report certain types of armed group-specific behavior? Might respondents who have had high levels of exposure to the presence and activities of armed groups have thought more thoroughly than others about factors that might explain these activities? If so, those factors might be more similar across areas with different exposures to violence than the survey responses would suggest. Here, the under-reporting of these factors in areas exposed to less violence could be attributed to respondents in these areas not having had the need to assess the war in as great a level of detail as respondents in areas of higher violence or armed group presence.

5 Conclusion

Research on civil wars often pays lip-service to the notion that problems inherent in retrospective recall create impediments to learning directly from people who have lived through the turmoil of these conflicts. There are two ironically contradictory flaws with this current practice, however. First, rather than engage with the nature of recollection and consider its consequences in detail, the lip-service approach attempts to admit the problem as a way to brush it aside. Second, however, by admitting the problem, the lip-service approach uncritically accepts that it is valid to assume that retrospective recall hinders inference. This memo proposes that future survey research on civil wars take a step forward and explicitly consider how trauma and systematic differences in wartime experience may affect respondents' accounts and the explanatory variables constructed from them. Researchers can then go beyond what has become the default – the extremes of ignoring the effects of retrospective recall on the one hand, and assuming that such effects certainly undermine causal inference, on the other hand – and identify the circumstances under which such effects undermine causal inference and the extent to which they do so.

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