Reassessing Spatial Proximity and Civil War – The Inclusion of Horizontal Inequalities

1 Introduction

The onset of civil war is an established research topic in various fields of academia, yet, scholars disagree on the conditions and reasons for it, and there is a great variety on potential causes (Newman and DeRouen 2014). The following research design takes up Cederman's et al. (2013) work on Horizontal Inequalities (HI) and their effect on the civil war, which focuses on motivation-driven mechanisms as causes for civil war. The goal is to contribute to this research field by adding a spatial dimension to Cederman's et al. (2013) model. More explicitly I want to look at the settlement patterns of ethnic groups and their group concentration by drawing on the work of Toft (2002, 2003) and quantitatively especially on Weidmann (2009), asking the question:

"How does group concentration, and hence spatial proximity of ethnic groups, affect the probability for civil war?".

Although the major interest of the research lies on the effect of ethnic group concentration and hence the spatial dimensions on conflict onset, it indirectly seeks also more clarification on the causal mechanism provided by Cederman et al. (2013). The authors propose that HIs lead to grievances, which then lead through mobilization (next to rebel claims and repression) to civil war, but refrain from including mobilization explicitly in their model. With the addition of the spatial dimension of group concentration, this research also seeks to fill this gap and wants to investigate how HIs and ethnic group concentration - being a potential condition for mobilization - interact. Figure 1 shows in a simplified model, what this research seeks to do:

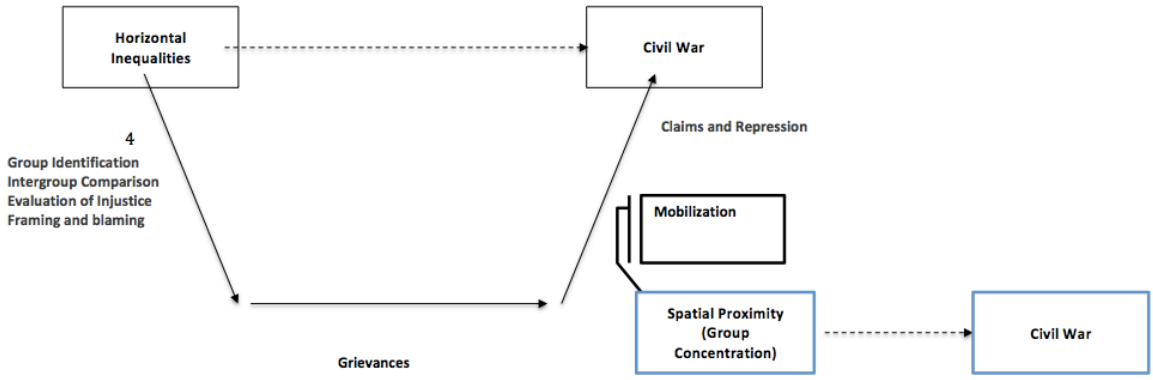


Fig.1: Embedding Social Proximity in the Horizontal Inequalities Model

2 Literature Review – What has been done and where to go

The inclusion of spatial information within civil war research is done extensively (Gleditsch and Weidmann 2012). A clear example is Buhaug and Gates' study (2002) on how geography, such as mountainous terrain or total land area affect the location and scope of where and how civil wars are fought. Based on such studies, Wucherpfennig et al. (2012) extended Cederman et al.'s (2010) earlier model for HIs - where political exclusion ethnic groups is the critical factor for conflict - with the variables "distance to capital" and "distance to border". The authors show with a new dataset that both variables affect territorial conflict, but not governmental.

Another study which combines also HIs with geographical aspects is provided by Gubler and Selway (2012). These authors move closer to the parameter of group concentration, by building their models partly on results done by previous research on group concentration, plus the research done by Østby (2008) on HIs, which facilitate mobilization. However they don't look at group concentration itself. Instead, they frame it as part of crosscutting cleavages, called ethnogeographic crosscuttingness, thus disguising how exactly group concentration is affecting conflict onset. Toft (2002) on the contrary does precisely that by looking at means for mobilization.

Applying quantitative methods using the Minorities at Risk (MAR) data, Toft (2002) shows that the perception of territory by ethnic groups and states is the key predictor of ethnic violence. Continuing this first research in a broader study, where she supplements her findings with extensive case studies, she shows - amongst others, specifically, that group concentration affects conflict onset (Toft 2003). Building on this Weidmann (2009) develops two different computational measures to show, that indeed ethnic group concentration, and not territorial concentration, affects conflict onset. His claim is then that coherent group clusters ease mobilization and hence increase the probability of conflict, emphasizing "opportunity-driven mechanisms" for conflict onset (Weidmann (2009, 528). In the introduction of the new dataset GREG, Weidmann et al. (2010) confirm the result that group concentration has a negative effect on conflict.

However, these papers don't model their findings in a broader context of HIs and hence focus almost entirely only on parameters associated with spatial dimensions. The possible inclusion of this variables has already been proposed though, but due to data limitations not yet fulfilled (Cederman, Wimmer, and Min 2010, 97–98).

The clearest example of a combination of the spatial dimension with HIs is the research done by Dumas et al. (2014). They indeed replicate Cedermann et al. study (2011) introducing spatial segregation of ethnic groups to it, finding evidence that excluded groups which are spatially segregated engage less likely in conflict, compared to the ones which are less spatially segregated. However, this analysis is more a side product in a claim of methodological problems in use of disaggregated data, confirming that one needs to account the spatial dimension, but lacking in a thorough theoretical approach towards it.

2.1 Relevance of my study

An explicit combination of HIs and group concentration is relevant from a theoretical perspective. First spatial dimensions don't act in a vacuum but are, as depicted in the literature above, influenced also by social dimensions, such as inequalities. Hence one needs to re-evaluate the influence of group concentration in a different computational model. Also, even though Toft (2003) expanded here studies with qualitative analysis, and thus including the context for her spatial variables, her quantitative work is done with the MAR dataset, which faced some criticism. On the one hand, it does not account for ethnic groups in general, but only minorities at risk (Denny and Walter 2014, 207–8; Vogt et al. 2015, 1329). On the other hand, it is not reasonably suited to evaluate group locations (Weidmann 2009, 533), or more broadly explaining mobilization (Hug 2013, 200).

Second, through the inclusion of group concentration into Cederman et al.'s (2013) model, one does (following Weidmann (2009)) add an exogenous variable for opportunity-driven mechanisms into the model. In the end, one can, therefore, combine two of the major strands in literature with scholars who focus either on opportunity-based mechanisms vs. motivations-driven ones as causes for civil war (Cederman, Gleditsch, and Buhaug 2013, 24–25; Weidmann 2009, 526–27).

3 Theory

Opportunity-driven mechanisms put a strong emphasis on economic models and look at parameters which enhance mobilization for civil war and its feasibility in general. They claim opportunities are the primary cause of civil war, looking at as aspects such as state weakness (see for example Collier, Hoeffler, and Rohner 2009; Fearon and Laitin 2003; Tilly 1978). As such they dismiss other factors namely ethnicity, inequality and the resulting grievances as the cause of civil war (Cederman, Gleditsch, and Buhaug 2013; F. Stewart 2016). However, as suggested by Cederman et al. (2013, 4, 14–15) a dichotomous divide between them is not necessary. On the contrary, mobilization is part of the whole story.

Stewart (2016, 13–14; 2000) has already pointed out, the occurrence of civil wars depends on the mobilization of (ethnic) groups, where HIs between groups provide the motivation for mobilization. Cederman et al.'s (2013; 2011) study is a good basis if you want to look at mobilization, since it already provides a model, which covers the motivation for mobilization through grievances.

According to Denny and Walter (2014, 202–4) then civil wars are often taken up by ethnic groups, due to the characteristics of ethnicity. First, they have a higher probability to be aggrieved, due to possible favoritism of the current rulers of one ethnic group. Second ethnic groups live in concentrated spaces and as such have a better opportunity to rebel because of easier mobilization. Thus one can state that in a model, which includes HIs and group concentration this first general hypothesis should still prevail:

H1: The more concentrated ethnic groups are, the higher is the likelihood for civil war

The mechanism behind this hypotheses is drawn mostly on economic models. Concerning Lichbach (1998), Weidmann (2009) proposes the following:

> "[…] because of the facilitated interaction of group members, concentrated groups are more likely to overcome collective action problems and therefore have a higher probability of engaging in conflict." (Weidmann 2009, 528)

The frequent interaction also forms "cognitive proximity" which enhances "collective grievances". Also in concentrated groups, organizational costs are reduced, and deviations from the collective action are more easily detected (Weidmann 2009, 532; Denny and Walter 2014, 202–5; Toft 2003). This mechanism makes sense since as for example it has been shown for Sierra Leone's civil war that indeed community cohesion, measured by a proxy of isolation of communities, predicts the joining of individuals for at least one of the two groups participating in the civil war (Humphrey and Weinstein (2008, 450). Thus, the mechanism points to the mobilization of forces for conflict to occur.

Furthermore the mechanism above must be seen within the context of overcoming collective action problems as mentioned by Olson (2003, 2). Referring to the free-rider problematic, he argues that it is more rational to not participate in a group interest when others can do it. For collective action to work, it needs some device, such as small groups or coercion also due to social pressure. Concentrated groups set a context where this is provided.

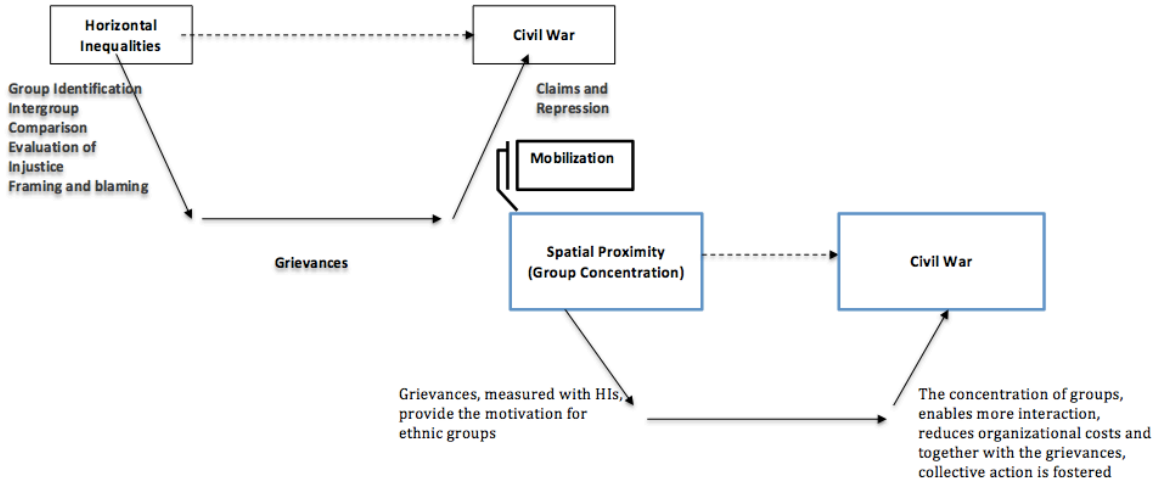
The proposed hypothesis H1 is not new and has been used similarly by Weidmann (2009, 532), but now it will be embedded in a broader context of HIs and grievances since these are the prerequisites for mobilization. Moreover, while repeated interactions can solve the collective actions problem, the relation to a common subject, especially if the group has the same interest is also a facilitating factor for collective action (Ostrom 2000). Hence the notion that proximity enhances "collective grievances" and thus makes the coordination of collective action easier, is more interesting in this context (Weidmann 2009, 532).

Approaching this problem slightly from the other direction, it is thus clear that the theories on collective action are important to explain mobilization. But one can not forget the motivation for mobilization, this being "emotionally charged grievances" (Cederman, Weidmann, and Gleditsch 2011, 482; Cederman, Gleditsch, and Buhaug 2013, 24–25, 46–47; Cederman and Girardin 2007, 175). Thus the effect of group concentration should be higher, if combined with inequalities, since these foster grievances at hence provide a basis for motivation to start a conflict. Applying this to economic and political HIs one can state the following hypothesis:

H1a: The ethnic groups which are more concentrated and also experience higher economic inequality, have a higher likelihood of civil war.

H1b: If the ethnic groups are excluded from political power, then ethnic groups which are more concentrated, have a higher likelihood of civil war compared to ethnic groups which are not excluded.

Fig 2 shows this in a continued model from Fig 1. where the mechanism of spatial proximity is now elaborated.



4 Alternative Mechanisms:

Obviously, the mechanism outlined above is not the only possible story. Some alternative explanations have already been touched within the literature review. The most prominent alternative mechanism claims that it is the remoteness of respective ethnic groups, such as mountainous regions or distance to the capital which facilitate conflict onset. Such conditions provide higher obstacles for states to suppress uprising and mobilization (Fearon and Laitin 2003; Dumas, Castner, and Gocev 2014, 23; Weidmann, Rød, and Cederman 2010, 494). Cederman et al. (2013, 52-53) have already accounted for such alternatives in their HI-model with additional regressions, which account for such factors. However, since my analysis is focusing specifically on the spatial dimension, it should be considered to include these factors in my main model as well.

5 Method and Data

Since I rely on replication data from Cederman et al. (2011), my approach is fairly similar to them, hence I hold this part rather short and focus on the issues, which might arise.

The goal is to apply a quantitative study using also rare-events logit regression models. I will also use the inclusive definition of civil war, with 25 battle-related deaths in a year instead of the stricter definition with 1000 battle-related deaths (Cederman et al. 2013 Online Appendix, 2, 13). The unit of analysis would be ethnic groups per year. However in the paper by Cederman et al. (2011, 487) and also in the book the analysis including economic inequalities, excludes dispersed groups (Cederman et al. 2013, 107). I would have to include dispersed groups though, since concentration, and hence the antonym dispersion, is the key to my analysis. But I am not sure then, whether I can calculate HI then in the economic perspective since apparently, one shouldn't include dispersed groups, but I don't quite understand why. I understand that it is about calculating relative wealth differences (Cederman et al. 2013, 101), can I then calculate simply the Inequality, with Low or High measures for relative economic inequality? Alternatively, I could use a different measure for spatial proximity than concentrated groups, since without dispersed groups, the variation might be too small?

My original idea however would be to calculate the group concentration by "number of territorial clusters occupied by the group", by the definition that "geographically concentrated groups occupy a single, contiguous region in a country" (Weidmann, Rød, and Cederman 2010, 494). I know this is not the best method to do so, but due to limitations in statistical skills, I opt for the more pragmatic calculation.

6 Biggest Problems:

- Find research gap, or asked differently: is the contribution enough or will it need to be supplemented with a case study? If the latter, how do I choose the case?
- More general: Should my focus be on HIs and I want to explain the mobilization part by including the spatial dimension, knowing that it is only a crude measure/proxy. OR is my focus on the spatial dimension and I want to add to this literature? Or does my combination of them work (as shown in the current model) without going in circles?
    - Depending on the answer, I would need to include more authors in the literature review which look at grievances (or HI) and mobilization such as Gurr & Moore's (1997).
    - Would also clarify whether H1a and H1b are drawn like in fig a or like in fig b (although from a computational perspective it doesn't matter, it would matter from a theoretical perspective).

Fig a) at the moment as formulated in the hypothesis

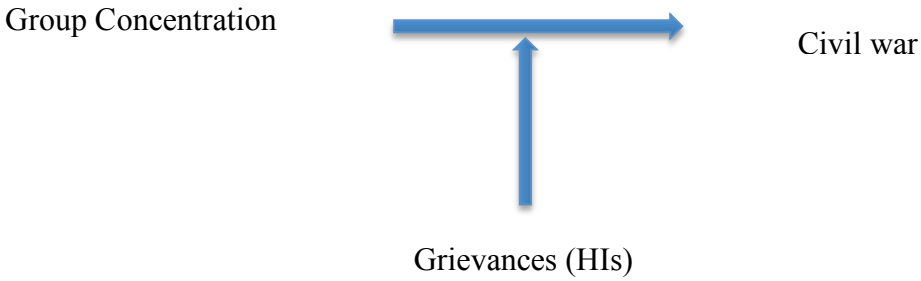
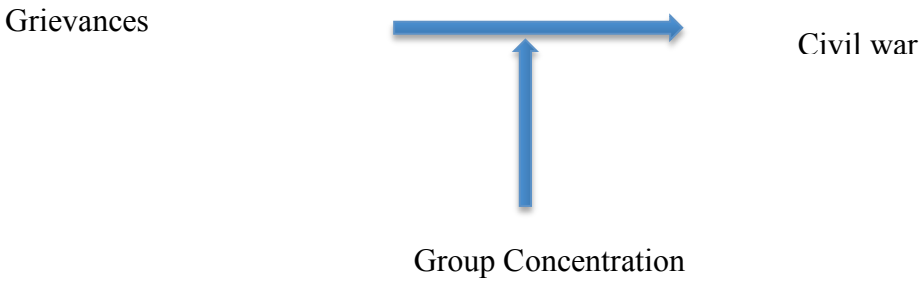


Fig b)



7 References

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