Ethnic and Religious Polarization and Their Effects on Civil War Duration
Shawna Meechan
Anna Harvey
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Question:

Do civil wars based in ethnic or religious conflict last longer than civil wars based in socio-economic or other conflicts? I look at this question through a quantitative analysis of the ethnic and religious polarization of different countries engaged in wars coded as ethnic by James D. Fearon. I look at the conflict in Northern Ireland to illustrate my theories and offer some possible explanations for my results. My question is particularly interesting because the level of ethnic tensions in a country has been looked at as a cause for civil wars, but no one has examined the possibility of ethnic conflicts causing civil wars to have increased longevity. I use the data collected by James D. Fearon as my measures for civil war duration and my other controls; and I use Marta Reynal-Querol’s polarization measurements of ethnicity and religion for my primary independent variables of interest.

Literature Review:

The literature in this area of study falls into two basic categories. There are those who study ethnic polarization and its effects on the incidence of civil war, but not the duration, and there are those who study civil war duration, but use fractionalization rather than polarization to account for ethnic disparity.

Ethnic Fractionalization vs. Ethnic Polarization:

In their paper, “Ethnicity, Insurgency, and Civil War” (2003), James D. Fearon and David Laitin investigate the claim that higher levels of ethnic diversity will increase the incidence of civil war along with several other hypotheses. They call the ethnic diversity variable ethnic or religious fractionalization. In other words, the larger the number of ethnic groups in a society, the higher the level of fractionalization.
Essentially, as Marta Reynal-Querol puts it, the fractionalization index captures the possibility that two randomly selected individuals in a country will be long to different ethnic groups. (Reynal-Querol 2002, 33) Fearon and Laitin measure the level of ethnic fractionalization based on the share of the population held by the largest ethnic group. This means that the larger the share of the largest ethnic group, the smaller the level of fractionalization, and the smaller the share of the largest ethnic group, the higher the level of fractionalization. The first hypothesis they entertain is that countries with higher rates of ethnic fractionalization will be more prone to civil war. They find that this is statistically untrue. The problem with the fractionalization measurement is that it does not take into account the share of all ethnic groups in a country. If, for example, a country with three different ethnic groups has a population share of 50 per cent for the largest group and 25 per cent each for the other two groups would have the same fractionalization measure as a country with three ethnic groups whose share was 50 percent, 49 per cent, and 1 per cent. I believe that the share of the population held by all ethnic groups is important in the measure. Polarization takes this into account where fractionalization does not.

In their article, “On the Measurement of Polarization”, Esteban and Ray discuss the dynamics of socio-economic polarization. In this paper, they loosely define a higher level of polarization as groups becoming more and more homogeneous within themselves and more and more heterogeneous between each other. (Esteban and Ray 1994) This means that a particular group has a high number of shared features between its members. In an ethnic group, such features may include, but are not limited to, religion, skin color, nationality, and country of origin. Between groups, however, there is a high level of
heterogeneity. This is harder to distinguish in ethnic cases as opposed to socio-economic cases because socio-economic problems can be quantified more readily. One can define an economic class within a society based on annual income plus previous holdings which can all be measured in numbers. In an ethnic conflict the differences could be in reference to identifiable differences in heritage or sizable differences in religious beliefs. These things are hard to attach numbers to and are sometimes even hard to identify.

Esteban and Ray explore the notion of economic polarization as a better measure of social tension that inequality. These measures have similar differences with the polarization versus fractionalization debate. Inequality measures the number of different economic groups or classes and asserts that the more groups in the society, the higher the levels of inequality. Polarization, however, measures the size of the groups and the nominal distance between each group as the level of polarization. In their paper, Esteban and Ray state that “there is no simple (and acceptably rich) partial order that will capture increasing polarization.” (Esteban and Ray 1994, 823) This is because polarization depends on both the size of the groups involved and the level of disparity between them. Therefore one could not just say that moving one some portion of the population from one group to another will either increase or decrease polarization always. What effect that move would have on polarization is also dependent on the size of each group prior to and after the move as well as the position and size of other groups in the society. For example, if there is some arbitrary economic scale 1 through 10, and we have groups with a 0.25 per cent share at 1 and 5 and a group with a 0.5 share at 10, then a merging of the two smallest groups at 3 would increase the level of polarization. But if the shares were instead 0.45 at points 1 and 5 and only 0.1 at 10, then the merging of the groups at 1 and
5 could be said to decrease polarization because the “common enemy” of the group now at 3 is comparatively very small. This is also why Esteban and Ray argue that there is no way to measure polarization linearly, but rather that it has to be measured on a moving scale. Esteban and Ray create a polarization measure as follows

$$I(\pi; y) = \sum_{i=1}^{N} \sum_{j=1}^{N} \pi_i \pi_j T[I(\pi_i), a(\delta(y_i; y_j))]$$

This equation is based on the theory that an individual will feel a stronger level of identification with its group the larger the group gets. This is represented by the function $I(p)$ with $p$ being the measure of people in the income class of individual $y$. In addition, the alienation factor felt by an individual from a particular group depends on the distance between the individual and said group. They assert that the “effective antagonism felt by $y$ towards $y’$ is given by the continuous function $T(1, a)$ and where $a = a(\delta(y, y’))$. Esteban and Ray narrow down the class of allowable measures using three axioms and find that only one measure, $P^*$, satisfies all the axioms. It is as follows:

$$P^*(\pi; y) = k \sum_{i=1}^{N} \sum_{j=1}^{N} \pi_i^{1+\alpha} \pi_j |y_i - y_j|$$

This is the equation that Montalvo and Reynal-Querol work from for their polarization model for ethnicity and religion. Esteban and Ray then go into several different explanations and proofs of their polarization measures. These measures look at the size of each group and make the assumption that two large groups that are far apart socio-economically are more polarized than several smaller groups. This is what differentiates polarization measures from fractionalization measures.

In their paper, “Why ethnic fractionalization? Polarization, ethnic conflict and growth”, José Garcia-Monatlvo and Marta Reynal-Querol try to address the differences
between fractionalization and polarization measurements. When measuring either fractionalization or polarization for just two ethnic groups, there is a high correlation between the two measurements, but when there are more than two groups there is little to no relationship. All of the measurements for fractionalization that they use are based on the index of ethnolinguistic fragmentation (ELF). The criterion for group formation was based on historical linguistic origin. (Montalvo and Reynal-Querol 2002) Specifically, the index takes the form

\[ ELF_j = 1 - \sum_{i=1}^{I_j} \left( \frac{n_{ij}}{N_j} \right)^2 = 1 - \sum_{i=1}^{I_j} s_{ij}^2 \]

where \( n_{ij} \) is the number of people that belong to ethnolinguistic group \( i \) in country \( j \), \( N_j \) is the size of the population of the country \( j \), and \( I_j \) is the total number of ethnic groups in country \( j \). Essentially, this measures the likelihood that any two randomly selected individuals selected from one country will not belong to the same ethnolinguistic group.

This is the same measure used by Fearon and Laitin. Montalvo and Reynal-Querol measure polarization using the following index.

\[ \Pi Q_i = 1 - \sum_{i=1}^{N} \left( \frac{1/2 - \pi_i}{1/2} \right)^2 \pi_i \]

where \( N \) is the number of ethnic or religious groups in the country and \( \pi \) is the share of the population of group \( i \). I explain in full detail the polarization measurement in the description of data section below. Essentially though, the polarization method says that the largest level of tension in a country will be felt when there are two ethnic groups with an equal share of the population. The more ethnic group that exist, the lower the level of polarization and the larger the size difference between the ethnic groups, the lower the level of polarization. They compare measurements with the two indices for low levels of
fractionalization and find a strong positive correlation with polarization. For the median range the relationship is zero and for high levels, the relationship is negative. They did the comparison for both ethnic and religious measurements and found the same pattern for both. (Montalvo and Reynal-Querol, 2002)

I have found that the majority of research on ethnic polarization can be found in the work of Marta Reynal-Querol. The article “Ethnicity, Political Systems, and Civil Wars” by Reynal-Querol discusses the importance of religious and ethnic polarization in a state for the incidence of civil war. She uses polarization measures rather than the traditional fractionalization measures used by others to capture the level of religious conflict in an area. She argues that polarization is a better measure of social conflict than is fractionalization. Polarization indices point out what Reynal-Querol calls the situation that leads to the maximum level of tension, namely when there are two opposing ethnic groups of the same size. Fractionalization indices, on the other hand, would put this situation at the low end of the conflict scale because of the minimal number of ethnic groups, paying no attention to the size. (Reynal-Querol, 2002) Reynal-Querol also discusses the idea that religious divisions are more important than language barriers in the incidence of civil war. Reynal-Querol makes a distinction using the index created by Sambanis to separate ethnic wars from revolutionary/ideological wars. Sambanis finds that ethnic civil wars are usually based in social rather than economic reasons.

Reynal-Querol then goes on to discuss the importance of religion in the world today. She holds that religion polarizes people even more than ethnicity. She argues that religion is more of a defining characteristic than any other form of identification because it is exclusive and, for example, it is much harder to be half Catholic and half Jewish than
it is to be half Irish and half English. Religion is also a non-negotiable in its nature. You cannot make compromises in the practice of your religion, and therefore, this makes settlement of a conflict a difficult and long process. (Reynal-Querol, 2002)

James D. Fearon argues in his paper, “Ethnic Mobilization and Ethnic Violence”, that the root of the conflict in Northern Ireland is ethnic rather than religious, as many people presume. He defines an ethnic group as referring to groups “larger than a family in which membership is reckoned primarily by a descent rule”. (Fearon 2004, 1) He also discusses the general qualities that ethnic groups share such as a “common language, religion, customs, a sense of homeland, and relatively dense social networks.” (Fearon 2004, 1) He asserts, though, that these characteristics only add to a sense of ethnicity rather than in and of themselves create one. In other words, the descent rule comes prior to these other traits and is necessary in defining a group as ethnic. He says that the decent rule is what makes membership in an ethnic group permanent. In this way, the conflict in Northern Ireland should be viewed as ethnic rather than religious because the Catholics can be classified as Irish of Celtic descent and the Protestants can be classified as Anglo-Irish because of their primarily English descent.

Ethnic vs. Non-Ethnic war:

Reynal-Querol (2002) also gives a definition of ethnic civil war which is very important to my thesis. She says, “an ethnic war is defined as an episode of violent conflict between governments and national, ethnic, or other communal minorities (ethnic challengers) in which the challengers seek major changes in their status.” (Reynal-Querol 2002, 37) Fearon also describes the dynamics of ethnic violence. He first defines an act of violence as ethnic if “it is motivated by animosity towards ethnic others, the
victims are chosen by ethnic criteria, or the attack is made in the name of an ethnic group.” (Fearon, 2004, p5) He also asserts that “ethnic conflicts engage intense emotions and a sense of existential threat.” (Fearon, 2004, p10) This leaves members of the ethnic groups involved feeling like killing is justified and completely reasonable.

Reynal-Querol uses data she collected about religious polarization from countries around the world to explain why certain countries enter into civil conflict. She does not, however, address the duration of these wars once they’ve been entered into.

Fearon addresses the issue of why ethnic groups tend to organize politically in his paper, “Ethnic Mobilization and Ethnic Violence”. He explains when ethnicity is socially and/or politically relevant. He says that when ethnic distinctions are noticed and felt in everyday life, they become socially relevant and when political coalitions are formed along those ethnic lines, they become politically relevant. He also says that violence can have powerful effects on the politicization of ethnicity. He notes that “violent attacks made along ethnic lines have often caused rapid and extreme ethnic polarization in societies in which ethnicity had not been much politicized.” (Fearon, 2004, p5) Oddly, he does not address this polarization when examining his data. This argument for why polarization occurs would be helpful in describing why ethnic civil wars are able to last for as long as they do.

Fearon tries to explain why some groups may choose to form political coalitions along ethnic rather than some other lines. He borrows from Bates (1983) and has two suggestions for this. The first is that it is easier to mobilize multiple groups with a shared language and customs rather than groups divided across ethnic lines. The second is that ethnic and administrative boundaries tend to coincide. Things like schools and other
goods are distributed unequally to benefit people in certain locations that coincide with ethnic groups. This is something that happens all around the world, but particularly in my example of Northern Ireland, it is clear that the neighborhoods which are mostly Catholic tend to have the worst schools and resources whereas the Protestant neighborhoods are more affluent.

Feraon also says that it may make sense for ethnic leadership to provoke violence if they can do so without being blamed for the instigation of it. He uses the example of 9/11 and the United States retaliation in Iraq. He says that Osama Bin Laden was able to “get away with” the violence he instigated in the U.S. and blame the U.S. for the violence in Iraq because people viewed the violence by the U.S. as a big government attacking the poor minority. In that sense, Osama Bin Laden was able to get away with instigating the violence which is now being blamed on the U.S. This is yet another way for an ethnic group to garner support and extend a civil war.

Fearon says that ethnic civil wars may tend to last longer than others, but he attributes this to the style of fighting rather than the ethnicity. He observes that the style of fighting in ethnic wars tends to be largely guerilla and is difficult to combat, which would account for the longer wars. He also says that one of the causes of this extended duration may be that the majority group cannot credibly commit to a compromise that both sides would prefer to violence. (Fearon, 2004)

Civil War Duration vs. Civil War Incidence:

Reynal-Querol also uses a model to prove that religious polarization has a greater effect on the incidence of civil conflict than fractionalization. (Reynal-Querol, 2002)
Reynal-Querol also finds that ethnic polarization has a positive correlation with ethnic civil war incidence.

The other research I have looked at has been on civil war duration. Much of this work has been done by James D. Fearon and David Laitin as well as Karl R. DeRouen and David Sobek. In their paper, “Ethnicity, Insurgency, and Civil War” (2003), Fearon and Laitin conclude that the high number of civil wars in the 1990’s is not due to the aftermath of the cold war, as many people have assumed in the past, but rather to the fact that the number of civil wars has been steadily increasing at about the same rate since the end of the Second World War. The large number of civil wars in the 1990’s had to do with the fact that these wars were starting at a much faster rate than they were ending. The increase in the length of these wars is what I am interested in looking at.

In his paper, “Why do Some Civil Wars Last So Much Longer Than Others?” (2004), Fearon analyses civil war duration considering several factors, including some ethnically related factors. For instance, he finds that wars he codifies as “sons of the soil” wars tend to last longer. “Sons of the soil wars”, according to Fearon, are wars in which there is an ethnic minority in a conflict with a state-supported, dominant migrant group. He would again classify the conflict in Northern Ireland this way with the Catholics (primarily of Celtic descent) against the state supported Protestants (primarily of English descent). He considers ethnic heterogeneity in examining what affects civil war duration and he finds a positive relationship between ethnic fractionalization and civil war duration. However, when he controlled for other factors, he found the effect of fractionalization to be insignificant. The problem with his analysis is that Fearon looks at ethnic fractionalization rather than polarization. The latter, I would argue, is the proper
measure for looking at ethnic civil war duration. Fearon also finds a strong negative relationship in wars that begin as coups or popular revolutions and duration. (Fearon, 2004) This suggests that, if sons of the soil wars are distinguishable by polarization data, then polarization may have an effect on the duration outcome of a civil war.

“The Dynamics of Civil War Duration and Outcome” (2004), an article by Karl R. DeRouen Jr. and David Sobek, analyses the different possible outcomes of civil war as well as the effect that the duration of a civil war has on the probability of each of the possible outcomes. Among many other findings, they conclude that ethnic wars last longer than other civil wars because the “high stakes generally make compromise difficult” (DeRouen and Sobek, 2004, p303). Barbara Walter would agree with them and she articulates this problem well in her paper, “Does Conflict Beget Conflict? Explaining Recurring Civil War” (2004). She says,

*Civil wars that are fought between competing identity groups are believed to be particularly intractable since, ..., ‘cultural identities – those based on common descent, experience, language, and belief – tend to be stronger and more enduring than most civic and associational identities.’ Moreover, once war breaks out, ethnic identities and hatreds tend to become cemented in ways that make cooperation and coexistence between the groups even more difficult.*

(Walter, 2004, p372)

This difficulty in achieving compromise will clearly extend the length of the war.

DeRouen and Sobek also assert that in the decision of whether or not to enter into a war, both governments and rebels make decisions with the outcome and expected duration in mind. (DeRouen and Sobek, 2004, p304)
Some researchers have looked at the incidence of civil war as well. Reynal-Querol uses a model to prove that religious polarization has a greater effect on the incidence of civil conflict than fractionalization. (Reynal-Querol, 2002) Reynal-Querol also finds that ethnic polarization has a positive correlation with ethnic civil war incidence.

In examining the different reasons that rebels enter a war, DeRouen and Sobek look at the duration that the rebels may anticipate from the start. For example, if a rebel group is behaving according to Collier’s rebellion-as-business, or greed/viability model, then rebels might be more interested in surviving rather than victory, in which case we would expect a very long war. In this case, the rebels’ main aim isn’t necessarily to win the war, but rather just to prolong it. It is possible that a rebel group may have no belief that they might win, but they fight the war for ideological reasons. Therefore, the mere survival of the fight is the objective, not winning. DeRouen and Sobek also suggest that rebels may fight because of “ethnic identity issues or economic shortcomings…prolong[ing] wars as rebels continue to fight and attract more recruits.” (DeRouen and Sobek, 2004, p305) The “indivisibility of the issue” may cause the war to be prolonged or hinder the ability to seek a truce or treaty.

In their analysis, DeRouen and Sobek do not look only at ethnic civil war, but they use it as an independent variable for duration and outcome type. They find that ethnic wars are harder for rebels to win and they also find that heterogeneity works against the rebels. They do not go into any explanation more than this of ethnic heterogeneity and its effects on rebel victory or duration.
They also find that the longer a war goes on, the more likely it is to end in a compromise or treaty rather than a flat out victory by either side. (DeRouen and Sobek, 2004) Given they found earlier that the high stakes of ethnic war make compromise difficult, this finding about the likelihood of treaty in a long war would indicate that ethnic civil wars would last even longer than other rebellions that end in treaty. DeRouen and Sobek address a lot of the issues of ethnic civil war, but they look at ethnic fractionalization rather than polarization. My research covers this missing area of study.

Paul Collier, Anke Hoeffler and Mans Soderbom wrote a paper, “On Civil War Duration”, which also addresses the different factors that might cause an extended civil war. In this paper, the authors look at many of the same factors that others have looked at including socio-economic status of the both the rebel group and the government actors before, during, and after the conflict; size of the population in the country at war; and ethnic fractionalization. In looking at ethnic fractionalization though, Collier et al make a finding that would support my hypothesis about ethnic polarization.

The effect of ethnic diversity is significant and substantial, but it is non-monotonic: the duration of the conflict is at its maximum when ethnic fractionalization is around 50 on its 0-100 scale. This typically occurs when the society has two or three large ethnic groups. One interpretation of this is that when there are only two major groups, one is the government side and the other is the rebel side, so that this degree of diversity at the national level actually increases social cohesion on the rebel side. Beyond this, higher levels of national diversity introduce
diversity into the rebel side and so reduce cohesion. (Collier et al, 2004, p263)

This statement argues that the polarization measure is a better measure than fractionalization for analyzing civil war duration. This is encouraging for the continuation of my research. Collier et al did, however, find that religious fractionalization had almost no effect on civil war duration. I would argue that this is because they used the fractionalization measure rather than polarization.

My research is focused on looking at the duration of civil wars that are ethnically based and their relation to ethnic and religious polarization. I think there is room in this area of study for my work because, as I have said previously, many people have looked at these different elements of civil wars and ethnicity, but no one has yet to look at the relation between the two. This is the niche for my research to fill.

Causal Model:

My hypothesis is that the greater the level of ethnic or religious polarization in a country suffering from civil war, the longer the conflict will last.

There are several reasons to believe that my hypothesis is correct. First, as both Ciarán O’Kelly and Marta Reynal-Querol state, ethnic and religious affiliations are permanent statements of one’s personal identity. These are two of the most basic characteristics that bring people together and solidify ties amongst members of shared groups, as well as clearly define divides amongst different peoples. It is because of the nature of ethnicity and religion that wars based in either or both of these principles tend to be more difficult to resolve. Reynal-Querol says that conflict is especially hard to resolve when it is religious because religious beliefs are fundamental and cannot be
compromised. (Reynal-Querol 31) Religious beliefs are the core of one’s moral code and, therefore, any threat to one’s religion is a threat to one’s way of life or sense of being. This may be why, for instance, the war between the Palestinians and the Israelis is ongoing. Neither side is willing to compromise any part of their religious beliefs because these beliefs are so fundamental, thus prolonging the war. Particularly in this conflict, Charles King’s comment about the physical commitment ethnic groups face is extremely relevant. He says, “Ethnic groups may feel that a particular piece of real estate is historically theirs and that allowing it to be controlled by an alien group would be tantamount to national betrayal.” (King 2001, 527)

Though I agree that religion in and of itself is not-negotiable, I would also argue that it is possible to join a new religious group, but not an ethnic group. Even though the Israeli/Palestinian conflict is primarily religious, I hold that ethnicity is just as strong a contributor to civil war duration, as explained in Fearon’s paper, “Ethnic Mobilization and Ethnic Violence”. Here, he talks about the “descent rule” for being a part of an ethnic group. One has to be born into a group, you cannot just join. For instance, one could be born in Spain and grow up immersed in the culture, but would not be ethnically Spanish unless one’s parents and ancestors had been Spanish. This descent rule makes ethnicity exclusive in the same way religion does. You cannot join unless you fit the exact criteria. I assert that wars based in ethnic conflict are just as polarizing as those based in religious conflict because religion also tends to be a factor in what is and is not ethnic. Therefore, I would classify religious wars as ethnic, rather than something separate from ethnicity. In regards to ethnicity as it applies to military conflicts DeRouen and Sobek say that “the indivisibility of the issues (ethnic identity issues) may
limit the ability to seek a truce or treaty.” (DeRouen and Sobek, 305) This should lend credence to my hypothesis.

Often times, it may appear to an ethnic group that war may be the best option for improvement of their community. Once they have made a rational decision to enter into a war, they have also made the decision that war is better than peace, and so they may have little or no incentive to enter into a compromise. This, too, would prolong ethnic civil war. As Charles King points out “if groups feel that they can gain more by fighting than by negotiating,…. they are unlikely to seek peace.” (King 2001, 527) This seems to be particularly true for ethnic conflict more than other civil wars. Again, I believe this is attached to the notion of ethnic identity and unwillingness to compromise on any ethnic issues. Rebels in these conflicts may find it more beneficial to continue fighting and maintain a complete sense of identity than to compromise and possibly give someone else the authority to regulate their ethnic group’s behavior. This is in contrast to wars based in other conflicts, such as socio-economic, because in such wars the insurgent party stands to gain much from compromise.

Things such as money and resources can easily be negotiated over when identity issues are not at stake. This is because most other conflicts can be resolved with an exchange of money or resources. When wars are about social oppression, such as the French Revolutionary wars, gaining representation in parliament or making mobility through society easier is something that can be accomplished without changing something that is fundamental to one group’s identity. Money is fluid and easy to change, but ethnicity and religion are much more fundamental to one’s sense of self.
When it comes to identity issues, however, money will do nothing to solve a conflict when one feels their religion or ethnicity is being attacked or threatened.

I argue that ethnic violence tends to breed more ethnic violence and stronger polarization, which would lead toward stronger levels of extremist opposition. In the case of most wars, the longer fighting lasts, the more people grow tired of the costs of war (both monetary and in lives lost) and search for a quick solution. In ethnic wars, however, there seems to be a trend in which the higher the levels of violence and the longer the war, the more polarized people become and the easier it becomes for the rebel party to recruit and maintain new members. DeRouen and Sobek agree on this and attribute the phenomenon of seemingly longer ethnic civil wars to the ease with which the rebels find and attract new recruits. (DeRouen and Sobek, 305) I think the reason for this again lies in the almost unbreakable ties with ethnicity and religion.

Fearon says in his “Ethnic Mobilization and Ethnic Violence” paper that violence can have powerful effects on the politicization of ethnicity. He says that “violent attacks made along ethnic lines have often caused rapid and extreme ethnic polarization in societies in which ethnicity had not been much politicized.” (Fearon 2005, 5) This strengthens my hypothesis. A perfect example of this polarization is the conflict in Northern Ireland. As Ciaràn O’Kelly says in his paper, the people of Ireland were not really organized along ethnic lines politically until after the English government executed the leaders of the Easter Rising. (O’Kelly, 509) This polarized the country along those ethnic lines and caused the rest of the country to believe that a clean break from the English government and the English cultural influence was the only way to preserve the “true” Irish culture.
An important part of my theory is that different levels of polarization will breed different lengths of conflict. The strongest level of polarization is when there are only two ethnic groups in a society and they each have an equal share of the population (0.5, 0.5). This is more polarized than a country that has a share that would be, say, (0.4, 0.6) or (0.3, 0.7). I would argue that the level of tension builds between the two groups when there is an equal share of people in either group. With a (0.7, 0.3) share, the smaller group would feel that it was in a weaker position to begin with and wouldn’t want to enter into a conflict in the first place. Therefore, the larger the small group becomes as it approaches having half of the population share, the safer they will feel in opposing the larger group. Also, there is an implicit feeling of the larger group’s “right” to impose its own ethnic or religious traditions on the society because they are the majority. When there is an equal share, then both groups are looking to impose that “right”. As I discuss later in the data section of the paper, Marta Reynal-Querol explains this as well.

In the existing literature on civil war duration and that on polarization, there is room for a look at the effect of the latter on the former. Fearon says in his “Ethnic Mobilization and Ethnic Violence” paper that “ethnic wars may tend to last longer than others on average.” (Fearon 2005, 5) Though he attributes this possibly to the type of warfare used in civil wars, which is mostly guerilla, there is much room to look at the ethnic tension variable as its own causal story. DeRouen and Sobek also say, “…rebels fight because of ethnic identity issues or economic shortcomings. These grievances prolong wars as rebels continue to fight and attract new recruits.” (DeRouen and Sobek, 305) Again, this is another assumption made by the authors that ethnic civil wars last longer. Though these points are brought up, none of these authors ever explicitly test the
claim that civil wars based in ethnic identity issues last longer. These authors have left room in their research to be filled by a thorough analysis of the effects of ethnic and religious polarization on civil war duration.

The conflict in Northern Ireland is an excellent illustration of my causal model. “Being Irish” (2004), an article by Ciaràn O’Kelly, is where the original idea for my question came from. In this article, O’Kelly addresses the problems of the ethnic and cultural basis of the war in Northern Ireland. From the beginning of the conflict in Ireland (before the separation of the Republic of Ireland from Northern Ireland), the grievances of the people were based in socio-economic factors. The Catholics in Ireland were being oppressed in ways such as having no property rights, no right to vote, and no right to freely practice their religion. In an effort to appease the people, the English government enacted a range of policies that would lessen these burdens, many of which had been enacted before the First World War in 1914. But after the Easter rising and the executions of the leaders of this rebellion, the people of Ireland insisted on a clean break from the English government. The war of independence was fought from 1918 until 1921, and in 1922, Ireland seceded from the UK, with the exception of the north-eastern counties which became known as Northern Ireland. From this war came a sense of what it means to “be Irish.”

Being Irish came to be what it is now during the Celtic Revival which came in the mid to late 19th century. This led to a nation-wide need to record and preserve the Irish language, music, and history. In this romanticized version of Irishness, those who were truly Irish would be able to trace their ancestry to the times of the pagan Celts. At the very least though, those who were truly Irish were not being influenced by the English.
The claim to what it is to be Irish was also a part of Northern Ireland. Those who felt they were truly Irish, mostly Catholics, felt they were being oppressed by the Anglicized Protestants in the North. Those who were truly Irish needed to rise up and fight the rule of the English and the influence that the English culture had on the North. This led to the continuation of the conflict from before 1922 in the North. The Irish Catholics in the North don’t feel that their war has ever ceased. What O’Kelly says about using culture as a basis of political movement is important. The dangers of making cultural claims lie in the fact that first, cultural demands by their very nature are demands for action and therefore are inherently political. Secondly, he says demands that are rooted in a cultural demand are intolerant of internal dissent. For example, if there is an Irish Catholic Unionist in the North, then he would be going against the demands that his “culture” makes for him. This internal dissent weakens and essentially dissolves the demands that are being made on the basis of culture. This undermines the credibility of the original demand.

O’Kelly concludes his article by stating that the nature of identity politics leads to profound harm to those claiming the identity at stake. I think this is relevant to my question because it addresses the issue of where cultural claims come from and why these claims are so binding on members of the group that the leaders of the political group claiming a particular identity assert to be representing. O’Kelly’s claim that internal dissent cannot be tolerated also goes to motive for a long war. If one side backs down, then they are giving up a part of their identity or admitting that some piece was not important to their group. This weakens the groups’ arguments altogether and provides reason for a strong cling to the identity politics that started the war.
Some would argue that since the Good Friday agreement in 1998, the conflict in Northern Ireland is over. I argue, however, that the tensions that still exist based on the ethnic polarization in that state have imposed a continuing presence of conflict and occasional violence that would indicate that the problem is not nearly solved. Charles King notes that even with peace treaties and the imposition of new institutions in a state, “politics in peacetime becomes little more than an extension of war.” (King 2001, 528) He argues that this continues because the connections and networks that were created over the course of the war replicate themselves in new, state-like form. Belligerents are then able to set up quasi-states within the new state that maintain the tensions. The militant wing of the Sinn Fein party in Northern Ireland is a perfect example of this.

Fearon and Laitin say that, all else equal, states with higher levels of democracy should have the least amount of conflict because the minority has the right to change the government through legal means, the vote. (Fearon and Laitin, 2003) I would again disagree with this because in a majority rule system, the minority will always be outvoted, and therefore, they will have no representation in democratic governments. Northern Ireland is a great example of this. There now exists a democratic system in their parliament, but it seems that the conflict remains high. I do not include this variable in my regression because in his paper “Why Do Some Civil Wars Last So Much Longer Than Others?” (2003), Fearon himself finds that “a measure of democracy in the year prior to the start year of the conflict bears no systematic relationship with civil war duration, in either a bivariate or a multivariate analysis.” (Fearon 2003, 16) He suggests that a possible explanation for this might be that if a democracy faces a civil war, it is probably from a stubborn and strong-willed rebel group who would work against a quick
resolution. Fearon also finds that per capita income has a negative relationship on
duration except for the special exception of my case study, Northern Ireland. This is yet
another example of the strength of ethnicity in the duration of conflict. Northern Ireland
is an outlier in almost all regressions that have anything to do with duration. Such
regressions include per capita income against duration where Northern Ireland, with its
extremely long civil war, has the highest per capita income in the sample taken for
Fearon’s duration model. I anticipate that Northern Ireland will fit the polarization
regression that I create.

Testable Hypothesis:

Again, my hypothesis is that the greater the level of ethnic and religious
polarization in a country suffering from civil war, the longer the conflict will last. My
hypothesis can be tested by comparing how the duration of civil wars change from
country to country with different levels of ethnic and/or religious polarization. As the
levels of ethnic and religious polarization increase, then so too should the civil war
duration variable. Before this regression is run, however, I need to control for some other
variables that also may affect civil war duration.

Fearon includes a variable in his data called “sons of the soil” wars. He creates
this variable for cases in which state supported migrants from a dominant ethnic group
have taken over the land of a “peripheral ethnic minority” (Fearon 2003, 2). He finds that
these cases tend to have much larger durations than the average civil war and I therefore
must control for them. In contrast, Fearon also finds that civil wars starting as coups or
revolutions tend to be relatively short-lived. Again, this is something for which I need to
control. I speculate that maybe, in coup and revolution cases, the regime in power must
already be weak enough for another group to feel it could overthrow them and this is what might account for the difference in the length of these civil wars. Anticolonial wars have also had a tendency to be short. My final control variable is one that Fearon calls GDP type. This takes into account the source of the GDP of a country and is multiplied with the country’s population.

I am leaving out several controls that may seem odd to most people. This is because Fearon also leaves out these variables. In his own tests, Fearon found that some of the “usual suspects” do not have a significant effect on civil war duration when you control for the factors we have above. For example, one might assume the level of democracy (measured in the year before the war starts) would have an effect on the duration of civil war, however, Fearon has found it has absolutely no systematic relationship with duration. This is also true for GDP, population of the country, and per capita income.

**Description of Data:**

Fearon’s data set from “Why Do Some Civil Wars Last So Much Longer than Others?” provides me with a sample of 128 civil wars during the time period of 1945 to 1999 and I have measures from Marta Reynal-Querol for both duration and ethnic and religious polarization for 101 of those civil wars. Of those 101 wars, 57 were coded as “ethnic” by Fearon (2004). When running my regressions, I run them both on all civil wars for which I have data on ethnic and religious polarization, and on just the ethnic war group.

**Duration:**
I use Fearon’s (2004) data for civil war duration. He has three primary criteria for distinguishing civil wars from other sorts of rebellions or conflicts. The first criterion is that the war is between two sides, one of which has claim to the state power and the other of which is an organized, non-state group which sought to take control of the government, the land, or change government policies through violence. Fearon’s second requirement for a civil war is that at least 1000 people were killed over the course of the war with at least 100 deaths per year. Finally, there must be at least 100 deaths on each side to rule out the possibility of a massacre where one side is not an organized opposition (Fearon 2003, 6). As with any data set, this one has a few problems.

Fearon classifies civil wars with very strict guidelines and he only looks at data since the end of the Second World War. This is problematic for a couple of reasons. First, it assumes that any war that occurred after WWII was not already in progress prior to the war. This may seriously affect his measure of duration. In addition, by following Fearon’s strict guidelines, he may be leaving out data on wars that may not meet one or more of his criteria, but that would be useful in this regression.

Fearon also brings up the problem of exactly how to measure civil war duration. The appropriate time to mark the beginning and ending of a war has been contested by several different scholars. For some wars, it is easy enough to say that the war begins when the killing begins and ends when the killing ends, but for many cases, it is not this simple. Sometimes the killing may not begin or end in massive quantities. In these cases, it is hard to say when the ware begins or ends exactly. Also, in cases where the killing subsides and then resumes, it could be contestable whether the resumed killing represents a continuation of the previous war or a new war altogether. As it is difficult to agree on a
formal standard of what constitutes the end of a war, many scholars have settled on a rule of a formal peace agreement or treaty that leads to a significant reduction in killing for an extended period of time (two to five years, as Fearon suggests).

Though this rule seems to be the most reasonable one in deciding the length of a civil war, I find it to be problematic. In many cases, such as that of Northern Ireland or the long-running rebellions in North East India, the killing may end for a period of time where the insurgent side is recouping and rebuilding its strength without a formal treaty. Or, as has been the case in Northern Ireland, there have been formal peace agreements where there is not a significant decrease in the level of killing. Fearon coded these kinds of wars as continuations of the previous war. I agree with him that this is the appropriate way to measure such situations. These cases will always be problematic, but for the most part, we can rely on the criteria set above for determining the end of a civil war.

The problem in determining the beginning of a war comes from deciding when a series of violent acts belongs to the same cause or not. To get around this problem, Fearon has adopted the rule of saying “if one of the main parties in the conflict was defeated or otherwise drops out, we code a new war start if the fighting continues” (Fearon, 2003, 7). He also comes up with some additional criteria for coding the start and end years of a war by saying that the start year is the first year in which 100 people were killed, and it ends with either a “military victory, demobilization, truce, or agreement followed by at least two years of peace” (Fearon 2003, 7).

There are several other possible sources for duration data. In their research design, DeRouen and Sobek (2004) use data from Doyle and Sambanis (2000) to test their hypothesis. They also use Doyle and Sambanis’s definition of a civil war which is
“a conflict that (1) has caused more than 1,000 battle deaths; (2) has challenged the sovereignty of the state; (3) occurred within the boundaries of the state; (4) involved the state as a participant; and (5) involved rebels who launched a campaign that opposed the states and could inflict casualties.” (DeRouen and Sobek, 2004, 308) The major difference between this data set and that of Fearon is that Doyle and Sambanis count a civil war if it breaks the 1,000 deaths mark in one year and Fearon counts a conflict as a civil war if the 100 battle-death threshold is maintained year to year. The only problem I have with the Doyle and Sambanis data set is the way that they code the end of a war. They classify hostilities that occur within two years after a conclusion of peace as a new war. I would agree more with the Fearon in saying that the hostilities are still a part of the original war. Although parts of Doyle and Sambanis’s measure seem reasonable, Fearon’s data is very similar and well-respected, and therefore, I chose to use Fearon’s data.

Polarization:

The first issue that must be addressed when creating a measure of ethnicity of any kind is how one quantifies an abstract notion such as ethnicity. If we adopt a purely genetic view of ethnicity, we are disregarding the fact that different people feel different levels of attachment to their ethnicity. The first constraint on this part of the data is the admittedly “fluid” nature of race and ethnicity. This means that the way one classifies him or herself will vary from person to person and the exact classifications of an ethnic group may be ambiguous at best. Reynal-Querol and Montalvo address this issue by adopting a definition of ethnicity based on a purely biological or genetic standpoint.
This definition fits well with the definition Fearon introduced as well.

It is easier to find measures of religious affiliation as most people only identify with one religion and it can be a choice rather than just inherited. Montalvo and Reynal-Querol use “L’Etat des Religions Dans le Monde” (ET) measured in 1987 as their primary source for religious information because it differentiates the followers of Animist and Syncretic cults which they believe is important. This source is adapted from the information in the “World Christian Encyclopedia” (WCE) and corrected using national sources. The WCE does not work on its own because it has several well-known shortcomings. These include not accounting for the Syncretic cults in Latin America as mentioned above, underreporting the followers of Animist cults and primitive religions in Sub-Saharan Africa, as well as being extremely biased toward the Christian religions. This is why Montalvo and Reynal-Querol use ET as a cross-check of the WCE data. As a secondary source, they use “The Statesman’s Yearbook” (ST) also from the year 1987 which is based on national sources and usually has detailed accounts of Animist religions. Based on these two sources, the following religious groups are included in their measurements: “Animist religions, Bahaism, Buddhism, Chinese Religion, Christians, Confucianism, Hinduism, Jews, Muslims, Syncretic cults, Taoism, and other religions.”

(Montalvo and Reynal-Querol, 2005, 4-5) The problem with this measurement is also that it doesn’t distinguish between different sects of certain religions. For instance, clumping all Christian religions together does not account for the tensions between Catholics and Protestants in Northern Ireland, nor does it distinguish between the
different sects of Islam fighting in Iraq. These distinctions are important, I think, but unfortunately I have no way to account for them with the data available as of yet.

As far as the data on ethno linguistic diversity, Montalvo and Reynal-Querol define the six characteristics of an individual that matter for ethno linguistic classification as race, color, culture, language, the ethnic origin, and nationality. They define race and color as inherited whereas culture and language are learned. They describe ethnic origin as the “main name by which people are known.” (Montalvo and Reynal-Querol, 2005) This is admittedly hard to define, but this is the best definition offered by Montalvo and Reynal-Querol. Nationality is a peculiar one in that it can be either inherited or gained and can change. Because of their ease of definition, Montalvo and Reynal-Querol determine the two factors that play the largest role in classification to be race and language. Again, there are many sources from which to collect the above information. Montalvo and Reynal-Querol choose to use the information found in the World Christian Encyclopedia (WCE) whose main criterion for classification is based on a combination of race, language, and culture for a particular group. (Montalvo and Reynal-Querol, 2005) They choose this measurement because it is “neither purely racial nor linguistic nor cultural, but ethnolinguistic.” (Montalvo and Reynal-Querol, 2005, 6)

The polarization index I use is the same as used in Montalvo and Reynal-Querol (2002) and is as follows,

$$\Delta Q_i = 1 - \sum_{i=1}^{N} \left( \frac{1}{N} - \pi_i \right)^2 \pi_i$$

where $N$ is the number of ethnic or religious groups in the country and $\pi$ is the share of the population of group $i$. In words, the polarization of a country is calculated by subtracting the sum of the size of each ethnic group’s share of the population in relation
to the size of the other ethnic groups’ shares from 1. The highest levels of polarization come from countries with very few ethnic groups who have large shares of the population, the highest level being two groups with equal share; and the lowest levels of polarization come from countries with many ethnic groups with small shares of the population.

To explain the properties of the polarization index, Reynal-Querol gives examples of when polarization would be increasing or decreasing. She says it is clear that “if we transfer population from one group to another, the effect on the conflict level is different depending on the size of the group. Imagine a population composed of three groups distributed in the following way (0.5, 0.25, 0.25). If we transfer population from one small group to the other, the conflict increases.” (Reynal-Querol, 2002, 33) She goes on to say, “if the distribution is (0.45, 0.45, 0.1), and we transfer population from one big group to the other, the conflict decreases.” (Reynal-Querol, 2002, 33) The basic reasoning behind this is that in the first situation, one of the smaller groups is getting larger and therefore approaching polarization, and in the second situation, one of the larger groups is getting smaller and is therefore growing toward decreased polarization.

In societies that have more than three ethnic or religious groups, the polarization method still holds. In order for this construction to be a proper measure of polarization, Montalvo and Reynal-Querol say that it needs to have two basic properties. The first of these is that “if we merge the two smallest groups into a new group, the new distribution is more polarized than the original one.” And the second is “if we shift population mass for one group equally to other groups, which have equal size, then polarization increases.” (Montalvo and Reynal-Querol, 2005, 9)
Sons of the Soil:

While looking at conflicts in Asia, Fearon noticed that the longer civil wars tended to share a common element which he names “sons of the soil” conflicts. In these cases there is a state-supported ethnic group which, either because of population pressures or desires to move, moves into less populous areas where an ethnic minority lives. In these cases, the ethnic minorities being pushed out or stepped on may take up arms against the ethnic migrants or the state sponsoring them. Fearon thinks that the anger felt by the insurgents is usually less about the “in-migration” than it is about the state’s exploitation of their land’s natural resources. I would argue that the insurgents would be angrier about the infringement upon their ethnic identity by the state. In Northern Ireland, for example, a large part of the fight has been based around the Irish “right” to their own culture without the English influence in addition to political disputes and the fight over rights to the natural resources.

Fearon finds 21 sons of the soil cases based on the following criteria:

the civil war involves an insurgent band fighting on behalf of an ethnic minority on the periphery of a state dominated by another ethnic group; against the state’s military or parliamentary formations, and/or members of the majority group who have settled as farmers in the minority groups’ declared home area; and involves either land conflict with migrants from the dominant group or conflict over profits and control of fuel or mineral resources in the minority’s home area (Fearon 2003, 11).

Coups or Revolution:
First, in defining the coup/revolution variable included by Fearon, I need to define the difference between the two kinds of wars. In coups, there is a war between groups who want to take control of the state whose leaders were formerly members of the state’s central government. These can start as relatively small groups of people in each group in contrast to the popular revolution cases in which there is a mass demonstration in the capitol at the beginning of the war where the people are looking to overthrow the existing regime in power. Fearon found that in the 22 coup or revolution cases he coded, the average length of war was considerably less than that of the average civil war.

Anticolonial wars:

It is easy enough to define anticolonial wars as those in which a colony fights for emancipation from the colonial empire ruling it. There is conflict as to whether or not to include these wars in the civil war data set, however, Fearon argues they should be included and I agree with him. His first argument is that if these wars had been won by the colonial power rather than the colony itself, it would most definitely be kept within the data set. Some might argue that a civil war is between two parties within a single state and as the colonial empires were not “proper states”, they shouldn’t count. As Fearon argues, this is a false assessment as it is an ex-post evaluation of what a proper state is. Just because a state becomes emancipated, the war doesn’t lose its civil war status.

As I feel it is justified to retain the anticolonial wars in my data set, I will discuss the possibilities as to why they tend to be shorter. First, as Fearon suggests, maybe the wide-held idea that a state is only proper if it is physically and geographically contiguous makes it more costly for a colonial power to garner support internationally for the war.
Secondly, it is costly to ship soldiers and supplies over large distances as most of the colonies are. Fearon dispels this second theory by coding for wars where the rebel group is noncontiguous with the center of the state and he finds no significant correlation between these wars and duration. Regardless, there is a significant relationship between anticolonial wars and duration.

**GDP Type:**

A bivariate regression shows that per capita income measured in the year before the war’s start is negatively associated with civil war duration. This is statistically insignificant, however, until we remove the strongest outlier, Northern Ireland. The Northern Ireland conflict is an outlier because it is one of the longest samples for a war that is in our pool, but it is in the richest country. I will discuss in further detail why I think this might be. When we remove the conflict in Northern Ireland, the relationship becomes much stronger and statistically significant. We also know that countries with larger populations tend to have longer civil wars, but this again proves to be statistically insignificant on its own. Fearon created the variable GDP type which ties per capita income and population size together to account for both of these variables’ effects. This has proven to be statistically significant in my tests.

**Empirical Method:**

For this paper, I run several multivariate regressions. I use civil war duration as my dependent variable and religious and ethnic polarization as my independent variables. My controls are sons of the soil wars, anticolonial wars, coup and revolution cases, and GDP type. I run four regressions, two for each independent variable, one with all civil war cases and one with just ethnic wars. My regression equations are as follows where
\( y = \text{civil war duration}, \ x_1 = \text{ethnic polarization or religious polarization}, \ x_2 = \text{sons of the soil}, \ x_3 = \text{anticolonial}, \ x_4 = \text{coup/revolution case}, \ \text{and} \ x_5 = \text{GDP type}. \)

\[
Y = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5
\]

Below I have listed a summary of all of my variables including the number of observations, the mean, the standard deviation, the minimum value of the observations, and the maximum value of the observations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>128</td>
<td>8.7578</td>
<td>9.566795</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>Ethnic war</td>
<td>127</td>
<td>1.2677</td>
<td>.8769429</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Coup or Revolution</td>
<td>128</td>
<td>.1719</td>
<td>.3787542</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Anticolonial war</td>
<td>128</td>
<td>.1016</td>
<td>.303259</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sons of the Soil war</td>
<td>128</td>
<td>.1641</td>
<td>.3717874</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>GDP type</td>
<td>124</td>
<td>1.2823</td>
<td>1.5064</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Ethnic polarization</td>
<td>102</td>
<td>.5275</td>
<td>.2173881</td>
<td>.02</td>
<td>.982</td>
</tr>
<tr>
<td>Religious polarization</td>
<td>102</td>
<td>.5359</td>
<td>.3387082</td>
<td>.001</td>
<td>.999</td>
</tr>
</tbody>
</table>

I account for the possibility that either religious or ethnic polarization may have a stronger effect on duration than the other by running multiple regressions. I run two regressions for ethnic polarization, once with all civil war cases and once with just wars coded as ethnic, and I do the same with religious polarization. This allows me to compare theories on which may be a stronger variable.

My results were somewhat different than I had expected. I have listed below the two regressions for civil war duration in all civil war cases for ethnic polarization and religious polarization. I discuss my findings in the following “discussion” section after displaying my results.

Ethnic polarization:

For a one unit increase in ethnic polarization, duration decreased by over four years when controlling for sons of the soil cases, anticolonial wars and revolution cases,
and GDP type. This finding is not significant at the 95 per cent confidence level, however, with a p-value of .279. This indicates that there is a 27.9 per cent chance that the relationship I found is actually due to random chance.

Number of Observations: N= 101 \[ R^2 = 0.219 \]

| Variable            | Coefficient | Std. error | t-score | P>|t| |
|---------------------|-------------|------------|---------|------|
| Coup/revolution     | -6.649      | 2.420      | -2.75   | 0.007|
| Anticolonial        | -4.596      | 2.935      | -1.57   | .121 |
| Sons of the soil    | 4.349       | 2.292      | 1.90    | .061 |
| GDP type            | -1.873      | .673       | -2.78   | .007 |
| Ethnic Polarization | -4.798      | 4.409      | -1.09   | .279 |

Religious polarization:

For a one unit increase in religious polarization, duration decreased by over three years when controlling for sons of the soil cases, anticolonial wars and revolution cases, and GDP type. This finding is not significant at the 95 per cent confidence level,
however, with a p-value of .198. This indicates that there is a 19.8 per cent chance that
the relationship I found is actually due to random chance.

Number of Observations: N= 101 \[ R^2 = 0.243 \]

| Variable                  | Coefficient | Std. error | t-score | P>|t| |
|---------------------------|-------------|------------|---------|-----|
| Coup/revolution           | -5.733      | 2.389      | -2.40   | 0.018 |
| Anticolonial              | -4.98007    | 2.848      | -1.75   | 0.084 |
| Sons of the soil          | 5.180485    | 2.286      | 2.27    | 0.026 |
| GDP type                  | -1.755623   | .659       | -2.66   | 0.009 |
| Religious Polarization    | -3.718692   | 2.866      | -1.30   | 0.198 |

It seems to make sense that my findings might be off for all civil war cases. Not
all wars are ethnic and therefore I cannot expect ethnicity to affect all wars. If the
grievances are based on conflicts that do not fall along ethnic divides, meaning there are
people of the same ethnicity on both sides of the fight, then ethnicity would not be a
factor in the duration of the civil war. This is why I have run my regressions for all civil
war cases that Fearon codes as “ethnic”. My results for this are below and I will again
discuss my findings in the “discussion” section later in the paper.

Ethnic Polarization:

For a one unit increase in ethnic polarization, duration still decreased but this time
by over ten years when controlling for sons of the soil cases, anticolonial wars and
revolution cases, and GDP type. This finding is not significant at the 95 per cent
confidence level, however, with a p-value of .132. This indicates that there is a 13.2 per
cent chance that the relationship I found is actually due to random chance.

Number of Observations: N= 54 R² = 0.225

| Variable                | Coefficient | Std. error | t-score | P>|t| |
|-------------------------|-------------|------------|---------|-----|
| Coup/revolution         | -6.572      | 5.027      | -1.31   | 0.197 |
| Anticolonial            | -6.529      | 3.759      | -1.74   | 0.089 |
| Sons of the soil        | 4.766       | 3.029      | 1.57    | 0.122 |
| GDP type                | -2.118      | 1.229      | -1.72   | 0.091 |
| Ethnic Polarization     | -10.379     | 6.779      | -1.53   | 0.132 |
Religious polarization:

For a one unit increase in religious polarization, duration still decreased but this time by over ten years (similar to ethnic polarization when controlling for ethnic wars) when controlling for sons of the soil cases, anticolonial wars, and GDP type. This finding is my only significant finding at the 95 per cent confidence level with a p-value of .029. This indicates that there is only a 2.9 per cent chance that the relationship I found is actually due to random chance.

Number of Observations: N= 57 \[ R^2 = 0.292 \]

| Variable             | Coefficient | Std. error | t-score | P>|t| |
|----------------------|-------------|------------|---------|-----|
| Coup/revolution      | -5.494      | 4.365      | -1.26   | 0.214 |
| Anticolonial         | -8.757      | 3.716      | -2.36   | 0.022 |
| Sons of the soil     | 5.938       | 2.879      | 2.06    | 0.044 |
| GDP type             | -1.801      | 1.077      | -1.67   | 0.100 |
| Religious Polarization | -10.102   | 4.505      | -2.24   | 0.029 |
Discussion:

It is clear from looking at my results that my theory is either not correct, or there is some problem with the data set I created that would cause my results to be either insignificant or opposing my theory or both. In this section, I will explore some of the possibilities that may have caused these inconsistencies as well as some possible downfalls in my theory that may account for the results.

I am not surprised that there were no significant results for the two regressions that I ran for all civil war cases. It makes sense that ethnicity should only have an effect on wars in which the central conflict is over ethnicity issues. It also seems that ethnicity and religion are closely related. In both sets of regressions, the polarization coefficients for ethnicity and religion were very similar, though they may not have all been significant. I think that this is probably because, in places such as the Middle East, ethnicity and religion are essentially the same thing. The Israelis and the Palestinians are always referred to by their ethnicity; however the fighting is mostly over religious boundaries. Even so, one would be hard-pressed to find a Palestinian Jew or an Israeli Muslim. This close relationship between ethnicity and religion is not exclusive to the Middle East and so I believe that the close correlation between the effects of ethnic polarization and religious polarization makes sense.

There are many reasons why my results may have come out as they did. The first possibility is problems with my data set. In measuring the duration of a war, as I discussed in the data section, it is very debatable where the line should be drawn for the beginning and end of wars. Because there needs to be a hard and fast rule for the sake of consistency, a data set cannot take into account the nuances of each conflict in
determining its length. For example, the conflict in Northern Ireland is counted as a 31 year conflict, starting in the late 1960s and ending with the Good Friday Agreement in the late 1990s. The rules about the number of deaths per year do not account for the years of violence that preceded the “official” start of the war. This measure also does not take into account the number of people still aligned with the rebel group, the Irish Republican Army, who continued to fight and prolong the violence for years even after the peace treaty, though not at the 100 deaths a year rate set by Fearon. Finally, the data set does not acknowledge that this or any other civil war may have been going on prior to World War II. The set starts in 1945 and goes through the end of the 1990s. I would argue that the Northern Ireland conflict, and I’m sure many others, were continuations of troubles that existed well before World War II and were essentially postponed during it.

Another issue that may have arisen from my data was the measurement of ethnic and religious polarization. The equation used by Marta Reynal-Querol to create the index of polarization seems very logical. She looks at the proportion of a society held by each ethnic or religious group within it and measures that against the number of ethnic or religious groups to find the polarization. This seems to me the right way to measure polarization. Where the problem arises is how to decide the number and size of the groups as well as the boundaries within which to measure them. By this I mean that if the conflict is confined to a particular area, it may not make sense to measure the polarization of the whole country. I again turn to Northern Ireland as my example. The polarization measurements taken by Reynal-Querol are for the United Kingdom and not for Northern Ireland. This means that her measurements take into account all of the ethnic and religious groups represented in all of England, Scotland, Wales, and Northern
Ireland even though the fighting was almost entirely confined to Northern Ireland and wasn’t at all involved with either Scotland or Whales. I would think it makes more sense to measure the polarization of Northern Ireland separately from the rest of the country because the fighting was almost entirely confined to that region. This is an oversimplification of the measurement problem, however, because the United Kingdom is unique in its set-up and Northern Ireland is geographically separate from the rest of the country which makes it easy to define the borders that might make for a better measurement. In most other countries, this distinction is not so easy and it is hard to define the border within which the fighting is actually happening, though in most conflicts there is some sort of centralized region where most of the fighting occurs. So, once again, trying to maintain consistency for the sake of the data set can cause some problems.

Another clear problem with this data set is, as discussed earlier, the difficulty of measuring levels of ethnicity. Measuring ethnicity requires that we choose some arbitrary characteristic such as descent, color, religion, or country of origin and claim that it is the single best way to determine ethnicity. Once this is determined, the polarization method essentially asks the question “How ethnic is a country?”, whilst assuming that all people feel the same level of devotion to their own ethnicity within that country. This is not an easy question to answer. One would first have to define what exactly ethnicity is. As I discussed in my data section, this is a debatable topic. I would argue that in the end, ethnicity is a feeling or even an affinity for some part of one’s genetic background that a person chooses to associate with. It is true that in order to be a part of any particular ethnic group, there is the descent rule that Fearon discussed, but beyond that, especially
in the global society of the 20th and 21st centuries, one has a choice to affiliate oneself strongly with one’s ethnicity or not. Also, there are so many aspects to ethnicity that it is hard to decide which is the most important, if any, and what would exclude one from the group if one didn’t have a particular characteristic. In the end, ethnicity is very difficult to capture in an arbitrary number, and it may be this difficulty that caused the oddities in my results.

Another possible cause of my odd results may be one of my control variables, the sons of the soil dynamic created by Fearon. This was created to account for cases in which a state supported ethnic group moves into an area populated by an ethnic minority and tensions arise. In these cases there is an element of “we were here first so we have a right to this land” mentality. When I started this project, I was basing my research on the conflict in Northern Ireland which I had decided was an ethnic conflict more than anything else. This sons of the soil dynamic, however, also describes the conflict there well. The Catholics of Celtic descent would be the ethnic minority whose land was taken over by the state sponsored Protestants of Anglican descent. It is possible that this is a better description of the conflict where ethnicity does play a role, but the primary conflict is over the land that the Catholics feel is rightfully theirs. It is hard to separate these two dynamics, but it may be that the ethnic tensions felt are only triggered when the ethnic minority feels that they are being threatened by the dominant group’s control over land and resources.

Yet another reason that may have caused my results to be different than previously anticipated is the size of the data set I was working with. Because I was using Fearon’s data set which only looks at civil war cases since the end of World War II, I was
very limited in the number of observations available to me. Also, when merging Fearon’s data set with Reynal-Querol’s, there were some cases that had to be dropped because Reynal-Querol didn’t have polarization measurements for them. So, in the end, my data set was left with 101 civil war cases total, and only 57 cases which were coded as ethnic. With such a small data set, it is hard to claim that any of my results are absolute. I would need a larger data set to be able to identify outliers as well as if there is a larger trend that is hard to see with such a small data set.

The final reason I have found that may account for my results is a flaw not in my theory, but in my question. Perhaps, I should have asked why it is that some ethnic and religious differences are politically important in some countries where they are not in others. This is the question that is explored by Daniel Posner in his paper “The Political Salience of Cultural Difference: Why Chewas and Tumbukas are Allies in Zambia and Adversaries in Malawi” (2004). In this paper, he looks at the Chewa and Tumbuka tribes in Zambia and Malawi and tries to discover why their cultural differences seem to be important in Malawi, but not in Zambia. The answer he comes up with is simple. He thinks the reason for the difference in tensions is not just the differences themselves, but the size of the ethnic groups in relation to the population of the rest of the country. Essentially, politicians will find it helpful to form alliances with a group if their size is large enough to make the alliance politically relevant. This seems to be a good story for the conflict in Northern Ireland. As Posner says, “the cultural division between Catholics and Protestants in Northern Ireland may be highly salient, but not the one between Presbyterians and Episcopalians.” (Posner 2004, 529) Because the size of the Catholic and Protestant groups is large in relation to the rest of the population, it becomes
politically relevant to emphasize the differences between these groups. Posner even goes so far as to say “the origins of the cleavage (emphasized by constructionists) and its cultural content (emphasized by primordialists) are irrelevant. All that matters is cultural demography.” (Posner 2004, 530) This again seems to fit the Northern Ireland story. Something such as the difference in the sect of Christianity which would not be politically salient in most other parts of the world becomes extremely relevant when the size of the different sects involved is so large in comparison to the size of the general population.

**Conclusion:**

It is hard to say exactly what made my results come out as they have, but it appears that ethnic and religious polarization may have no effect on civil war duration. Though this is disappointing for the purposes of proving my hypothesis, it has good implications for the world. This may mean that things such as ethnicity have become less important in our world and that we may be able to solve conflicts with treaties, peace agreements, and compromise over political and economic power within society.

This paper will be a contributor to the existing literature in several ways. For the literature on civil war duration, I have been able to rule out one more possible reason for the trend in longer civil wars that we have seen since the end of World War II. Many authors have tried to test ethnic fractionalization in regards to civil war duration and have found no correlation, and so by looking at the polarization index, I was able to say that ethnicity does not effect civil war duration by either of the two accepted measurements of ethnicity.
As far as the literature on polarization, this paper is particularly important. The polarization index is relatively new and has not been through a lot of rigorous testing. Thus far, Reynal-Querol has been able to show that ethnic and religious polarization have an effect on the incidence of civil war, meaning that the higher the level of ethnic or religious polarization within a society, the more likely it is for a civil war to break out in that country. With my test on civil war duration, I have shown that ethnic and religious polarization does not have an effect on the duration of the conflict once it has started. This must indicate that the motivations for fighting either change once the conflict has been entered into, or that it was not ethnic conflict that induced the war in the first place. Whatever the findings, this has been an important step forward in the research on civil war duration and ethnic and religious polarization.
References


Fearon, James D. and David D. Laitin. “Ethnicity, Insurgency, and Civil War”.


