# Ethnic Violence in Africa: Destructive Legacies of Pre-Colonial States

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October 24, 2018

**Abstract**

What explains differential rates of ethnic violence in post-colonial Africa? This article argues that ethnic groups organized as a pre-colonial state (PCS) exacerbated inter-ethnic tensions in their post-colonial country. Insecure leaders in these countries traded off between inclusive coalitions that risked insider coups, and excluding other ethnic groups at the possible expense of outsider rebellions. The main hypotheses posit that PCS groups should associate with coups because their historically rooted advantages often enabled accessing power at the center, whereas other ethnic groups in their countries—given strategic incentives for ethnopolitical exclusion—should fight civil wars more frequently than ethnic groups in countries without a PCS group. Analyzing originally compiled data on pre-colonial African states provides statistical evidence for these implications about civil wars and coups between independence and 2013 across various model specifications. Strikingly, through 1989, 30 of 32 ethnic group-level major civil war onsets occurred in countries with a PCS group.

**Keywords:** African politics, Civil war, Coup d'etat, Ethnic politics, Historical statehood

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Violent political events such as civil wars and coups d'état have plagued Sub-Saharan Africa (henceforth, "Africa") since independence, causing millions of battle deaths and undermining economic development. Prior to 1990, 53 African rulers lost power via violent overthrow whereas only one stepped down after losing an election.[1] Violent perpetrators have often organized support around ethnic identity and have frequently espoused ethnic aims,[2] and most major civil wars since 1946 have involved distinct ethnic claims and recruitment.[3] However, African ethnic groups also exhibit considerable variance. Between 1946 and 2013, 79 percent of politically relevant ethnic groups did not participate in any ethnic civil wars, and 76 percent did not participate in any successful coup attempts.[4]

Although extensive research advances our understanding of the ethnicity-violence relationship, most existing theories do not convincingly explain variation within Africa.[5] By focusing primarily on post-colonial causes, much of this research overlooks longer-term factors that have affected variance in key underlying factors, such as the political salience of ethnic differences. Cederman and co-authors consider African countries among a broader global sample and show that ethnic groups excluded from power in the central government initiate civil wars more frequently than groups with access to power.[6] They argue that the spread of nationalist ideology to the colonized world explains the prevalence of ethnic exclusion in the post-colonial world.[7] Roessler argues that weak institutions across Africa have fostered an internal security dilemma whereby leaders fearful of a coup d'etat exclude rivals from power along ethnic lines.[8] Francois et al. examine a similar tradeoff and highlight the striking pattern—in contrast to earlier characterizations of "big man" rule in Africa—that to prevent both coups and revolutions, African rulers have consistently allocated cabinet posts in proportion to ethnic group size.[9] Older studies present numerous case studies in which political factions emerged along ethnic lines in Africa and contributed to violence.[10]

[1] Reno 2003, 324.

[2] Horowitz 1985; Decalo 1990.

[3] The present dataset, described below, counts 31 of the 37 country-level conflicts through 2013.

[4] See Appendix Table C.5.

[5] Roessler and Ohls 2018, provide a recent exception discussed below, although they focus on a different explanatory factor than analyzed here.

[6] Cederman, Wimmer and Min 2010; Cederman, Gleditsch and Buhaug 2013.

[7] Cederman, Gleditsch and Buhaug 2013, 30-54.

[8] Roessler 2011, 2016.

[9] Francois, Rainer and Trebbi 2015.

[10] Horowitz 1985; Decalo 1990.

However, exposure to international ideologies and weak institutions were largely constant across the region. Why have several major ethnic civil wars occurred in Uganda, but not Kenya? Why did Benin experience a spiral of successful coup attempts after independence but not Cote d'Ivoire? Elusive answers to key questions such as these have engendered prominent critiques alleging that ethnic differences offer little explanatory power for political violence.[11]

This article provides new insights into ethnicity and conflict by taking a longer-term historical perspective. It examines post-colonial legacies of ethnic groups organized as states prior to colonization in Africa and provides three main contributions: (1) extends theories of the strategic coup-civil war tradeoff by showing how pre-colonial statehood exacerbated the internal security dilemma that African rulers faced after independence, (2) compiles a novel dataset on pre-colonial states in Africa, and (3) presents empirical evidence that this factor can explain considerable variance in post-colonial ethnic civil wars and coups between independence and 2013—in fact, almost every major civil war in the region during the Cold War era occurred in a country with a pre-colonial state (PCS) group.

First, the theory links pre-colonial statehood to post-colonial ethnic violence. PCS groups were, on average, distinguished from non-PCS groups through diverse historical channels: pre-colonial warfare and slaving, privileges in colonial governance (indirect rule), and incentives to create regionally rather than nationally oriented policies during the post-World War II decolonization era. These mechanisms contributed to divisive inter-ethnic relationships and also increased PCS groups' likelihood of accessing power in the central government.[12] The theory combines these historical considerations with a generic power-sharing tradeoff discussed by Roessler and others:[13] including a rival group at the center—for example, by offering cabinet positions—may pacify the group. However, given weak institutions and an inability to commit to deals, sharing power might instead facilitate a coup by the rival. Excluding the rival from power reduces coup risk from that group, but raises the likelihood of outsider rebellion. By exacerbating inter-ethnic tensions in their country, PCS groups worsened the central government's commitment ability and created broad strategic incentives for ethnopolitical exclusion—therefore enhancing conflict risk among *all* ethnic groups within their country (i.e., within-country spillover effects). The main hypotheses posit that members of PCS

[11] Fearon and Laitin 2003; Fearon, Kasara and Laitin 2007.

[12] Throughout, statements such as these refer to individuals that belong to broader identity groups, rather than suggesting that ethnic groups act monolithically.

[13] Roessler 2011.

groups should frequently participate in coups (an "insider" fighting technology) because their historically rooted advantages often enabled central power access.[14] Furthermore, members of other ethnic groups in their countries—given strategic incentives for ethnopolitical exclusion—should often fight civil wars (an "outsider" fighting technology). The hypotheses compare ethnic groups in countries with a PCS group to groups in countries without one, which tended to face lower incentives to violently control the political arena.

Second, the article introduces an newly compiled dataset on pre-colonial states in Africa integrated with the Ethnic Power Relations (EPR) dataset,[15] which codes politically relevant ethnic groups and their access to power in the central government. I consulted continent-wide historical maps and numerous additional secondary sources (over 100 in total) to code a binary PCS variable for each EPR ethnic group, based on the following operational definition for pre-colonial statehood: co-ethnics governed a substantial percentage of members of the EPR ethnic group through a single or small number of political organizations that exhibited some degree of centralized rule on the eve of colonization. This dataset improves upon the widely used Murdock dataset[16] by (a) coding pre-colonial statehood for a list of politically relevant ethnic groups with available data on participation in violence, (b) reducing measurement error from Murdock's original measurement and from datasets merging Murdock with EPR, and (c) providing more detailed and easily replicable information for each ethnic group.

Third, statistical findings from a panel of ethnic groups between independence and 2013 show the importance of pre-colonial statehood for facilitating political violence in Africa—contrasting with the predominant focus in the civil war literature on more contemporary correlates. Regression models estimate that PCS groups participated in successful coup attempts more than twice as frequently as groups in countries without a PCS group, and stateless groups participated in a major ethnic civil war more than four times as frequently if a PCS group resided in their country. Strikingly, through 1989, 30 of 32 ethnic group-level major civil war onsets occurred in countries with a PCS group, despite countries without PCS groups accounting for 39% of observations in the dataset.[17] The findings are similar when controlling for predictors of statehood in

[14] Although the theory focuses mainly on inter-ethnic tensions, the theory also discusses how low commitment ability and broader political instability should create favorable conditions for *intra*-ethnic coups.

[15] Cederman, Wimmer and Min 2010.

[16] Murdock 1967.

[17] Appendix Table C.2 provides summary statistics for the panel, and Table C.5 for a cross-section.

pre-colonial Africa and for standard conflict covariates. The estimated substantive magnitude of the effects is consistently large, and the results are similar under numerous additional robustness checks. Supplementary findings support hypotheses that explain ethnic party formation and that either predict or condition on ethnopolitical inclusion. Finally, surveying individual cases demonstrates that members of PCS groups were central to post-colonial civil wars and coups in 14 of 18 countries with a PCS group, and qualitative evidence from Uganda supports key mechanisms. The conclusion discusses implications beyond Africa and policy considerations.

In addition to ethnic conflict research, the new perspective on ethnic violence contributes to research on historical roots of African institutional weakness,[18] and historical causes of modern civil war.[19] It also offers a new perspective on the widely discussed legacies of pre-colonial statehood.[20] Many link pre-colonial statehood to stronger economic performance in Africa,[21] and elsewhere.[22] However, higher economic development should depress civil war propensity, yielding the theoretical prior that pre-colonial statehood should reduce political violence—contrary to the present analysis. The emphasis here also differs from classic works that downplay the importance of diversity in pre-colonial African political units. Herbst focuses primarily on generic challenges that rulers across time have faced in a region that, on average, has exhibited low population density.[23] Mamdani and Ranger each argue that European colonial administrators responded to a general lack of extant political organizations by "inventing" chiefly traditions to facilitate centralized tax collection in previously acephalous communities, and by granting widespread despotic powers to appointed leaders.[24]

The analysis also differs from two related studies on pre-colonial statehood and post-colonial civil war. Wig and Depetris-Chauvin each reach the opposite conclusion as the current article: ethnic groups organized as a pre-colonial state *decrease* post-independence civil war prospects.[25] The present theory posits that PCS groups create within-country spillover effects that raise conflict propensity for *all* groups in their

[18] Akyeampong et al. 2014.
[19] Besley and Reynal-Querol 2014; Michalopoulos and Papaioannou 2016.
[20] Osafo-Kwaako and Robinson 2013.
[21] Gennaioli and Rainer 2007; Michalopoulos and Papaioannou 2013.
[22] Bockstette, Chanda and Putterman 2002.
[23] Herbst 2000.
[24] Mamdani 1996; Ranger 2012.
[25] Wig 2016; Depetris-Chauvin 2015.

country. This implies that the conflict propensity of stateless groups differs systematically depending upon whether or not a PCS group resides in their country. The statistical results in Wig and in Depetris-Chauvin compare within countries by including country fixed effects in their regression models.[26] Therefore, using the language of the current paper, they compare the conflict propensity of PCS groups to stateless groups within their country. However, this approach will yield uninformative conclusions about violent legacies of pre-colonial statehood if PCS groups caused within-country spillover effects—in fact, the present theory associates PCS groups primarily with coups rather than with civil wars. Furthermore, compared to these two contributions, the current theory and empirical results offer insight into a wider range of outcomes, such as coups, ethnopolitical inclusion, and ethnic party formation.

# 1 Existing Theories of Ethnic Violence

## 1.1 Origins of Politicized Ethnic Differences

A large literature analyzes why ethnicity sometimes composes an important political cleavage, a precursor to understanding why it triggers violence.[27] Recent research devotes considerable attention to horizontal political inequalities, meaning that some ethnic groups access power in the central government whereas others do not. This research primarily concentrates on three historical factors to explain inequalities in political power among ethnic groups: (1) historical warfare, (2) modernization and the spread of nationalism to the Third World, and (3) strategies of European colonial rule.[28] First, the pre-colonial era in Africa coincided with a pre-nationalist era. Historically, before nationalist ideas spread outside Europe, warfare was an important cause of group-level inequality and domination.[29] Second, later in the pre-colonial era and into the colonial era, emergent nationalism hardened ethnic identities, facilitated inter-ethnic inequalities, and made groups cognizant of grievances toward other groups. Whereas many pre-modern societies lacked the ability to translate macro-cleavages into political action, modernization and nationalism created politically relevant differences among ethnic groups.[30] Most post-colonial countries in Africa combine many nations—

[26] Wig 2016; Depetris-Chauvin 2015.

[27] Fearon 2006.

[28] Cederman, Gleditsch and Buhaug 2013; Wucherpfennig, Hunziker and Cederman 2016.

[29] Cederman, Gleditsch and Buhaug 2013, 33.

[30] Cederman et al. 2013, 34; Gellner 1983.

specifically, *ethnic* nations—into a single political unit. These nascent distinctions engendered differential political power among groups. Third, colonizer identity as well as distance between the colonial center and ethnic group location also influenced central power access.[31] Britain often granted political authority to indigenous political units whereas France sought more centralized colonial rule. Indirect British ruling strategies enabled groups farther from the coast to access power at independence.

## 1.2 Strategic Causes of Coups and Ethnic Civil War

Building off their historical discussion, Cederman et al. emphasize that the post-colonial state does not provide a neutral arena for competing group interests, and ethnic groups instead view the state as a prize.[32] Only by entering and exerting influence in the political arena can ethnic groups articulate their social, cultural, and economic interests. This institutional logic generates their key hypothesis: if the incumbent regime blocks access for challenging groups, then the excluded groups face incentives to violently rebel.

Roessler builds on this theory by addressing a key question: why would a ruler exclude ethnic groups if this raises the likelihood of a costly activity, violent rebellion?[33] Focusing on post-colonial Africa, he argues that weak political institutions undermined rulers' ability to commit to sharing power at the center with rivals, for example, inability to commit to letting a challenger retain lucrative cabinet positions. This commitment problem created incentives for rivals to use violence, which generated a tradeoff for governments between preventing coups and preventing civil wars. Given the more imminent threat posed by potentially treasonous insiders, many rulers responded by prioritizing co-ethnics in central government positions and by excluding members of other ethnic groups, triggering the incentives for outsiders to launch civil wars on which Cederman et al. focus.[34] Roessler posits that these leadership security fears often provoked conflict specifically along ethnic lines because ethnic identity provides an easy information shortcut in countries where actors believe ethnicity is politically salient. This logic yields his core hypothesis that ethnopolitical exclusion substitutes civil war risk for coup risk.[35]

[31] Wucherpfennig, Hunziker and Cederman 2016.

[32] Cederman, Gleditsch and Buhaug 2013, ch. 4.

[33] Roessler 2011, 2016.

[34] Cederman, Gleditsch and Buhaug 2013.

[35] Roessler 2011, 2016. Two implicit assumptions in this framework and in much ethnic conflict research are (1) ethnicity is a useful framework for understanding motives for civil wars and for coups, even though

However, this *strategic* rationale for ethnopolitical exclusion is not the only possible motivation for exclusion. Even when facing low coup risk, rulers may still exclude groups for a distinct *opportunistic* rationale.[36] If a ruler believes that an ethnic group is unlikely to rebel if excluded, then regardless of its coup threat, the ruler may exclude to maximize control of rents and political power—implying that not all excluded groups pose a rebellion threat.

### 1.3 Summary of Logic for Coup-Civil War Tradeoff

Table 1 summarizes key aspects of this logic by considering a stylized interaction between a ruler and a rival that can be either coercively weak or coercively strong. It is most natural to conceive of these actors as members of different ethnic groups, although parts of the logic apply to intra-ethnic rivalries as well. If the ruler shares power, then the rival may be able to launch a coup, whereas if the ruler excludes, then the rival may be able to initiate a civil war.[37] Government commitment ability affects the rival's motives to fight (table rows), and the rival's coercive strength affects its opportunity to fight (columns). The left column highlights that a coercively weak rival is unlikely to fight (i.e., coup or civil war) regardless of its ethnopolitical inclusion status or government commitment ability. Consequently, the ruler prefers to exclude weak rivals for opportunistic reasons—why would the government share rents with a rival that will not punish exclusion by rebelling?

If instead the rival is strong (right column of Table 1), then government commitment ability determines the outcomes. High commitment ability—in the form of credible democratic power-sharing or an institutionalized inter-ethnic party—implies that the ruler can commit to deals such as lucrative cabinet positions for the rival (bottom row). The credibility of deals lowers the rival's coup incentives if included in power, but high

these events are rarely couched purely in ethnic terms, and (2) civil wars and coups are alternative coercion technologies for achieving concessions from governments if bargaining fails, despite also exhibiting important differences. The present theoretical framework adopts these premises, which Appendix Section B.1 defends at greater length.

[36] Fearon 2010, 17-20; Wucherpfennig et al. 2016; Roessler 2016, 60-81.

[37] Although it is sometimes possible for included groups to fight civil wars and for excluded groups to stage a coup, I follow Roessler's 2011 distinction between fighting technologies, which closely tracks empirical patterns.

**Table 1: Coups, Civil Wars, and Inclusion/Exclusion**

| | Weak rival | Strong rival |
|---|---|---|
| **Low government commitment ability** | If rival included: Low coup risk<br>If rival excluded: Low civil war risk<br>$\Longrightarrow$ Ruler prefers (opportunistic) exclusion<br>$\Longrightarrow$ Low fighting risk | If rival included: High coup risk<br>If rival excluded: High civil war risk<br>$\Longrightarrow$ Ruler prefers (strategic) exclusion<br>$\Longrightarrow$ High civil war risk if ruler can exclude<br>$\Longrightarrow$ High coup risk if ruler cannot exclude |
| **High government commitment ability** | Same as low commitment ability case | If rival included: Low coup risk<br>If rival excluded: High civil war risk<br>$\Longrightarrow$ Ruler prefers inclusion<br>$\Longrightarrow$ Low fighting risk |

coercive strength implies the rival would pose a rebellion threat if excluded. Constrained by this threat, the ruler prefers to share power.

But if the rival is strong and government commitment ability is low (top-right box in Table 1), then the government faces a coup-civil war tradeoff. Because the rival is strong, the ruler's inability to commit to deals implies high coup risk under power-sharing, but ethnopolitical exclusion yields high civil war risk. Connecting low commitment ability to conflict is a foundational result in formal conflict bargaining models,[38] and following Roessler's logic,[39] the more imminent threat of a coup implies that the ruler prefers to exclude the rival for strategic reasons. This logic also follows from a large literature on the tradeoff that rulers face between loyalty and efficiency. Rulers often choose to coup-proof their militaries by promoting unqualified generals (e.g., co-ethnics, family members) and by hindering communication among the officer corps, even if these strategies diminish battlefield efficiency in war.[40]

## 1.4 Why Do Coups Occur?

Given the strategic logic summarized in Table 1, it is somewhat puzzling that coups would ever occur—given rulers' preference to exclude threatening groups. However, even without appealing to factors such as incomplete information or misperceptions, this behavior is less puzzling when considering constraints that rulers face to excluding rivals, highlighted by the "can exclude" and "cannot exclude" language in the top-right box of the table. Two types of constraints are particularly relevant for the present substantive context. The first are historically rooted. Some African rulers inherited "split domination" regimes at independence

[38] Powell 2004.

[39] Roessler 2011.

[40] Quinlivan 1999; Powell 2014; Talmadge 2015.

in which one ethnic group dominated civilian political positions and a different group dominated the officer corps.[41] In these and related situations, the process of trying to exclude the rival may itself trigger a coup attempt.[42]

Second, drawing from the broader coup literature, general circumstances of political instability create permissive conditions for both inter-ethnic and *intra*-ethnic coup attempts by constraining the ruler to rely on potentially disloyal—and therefore rival—generals. Strong rebellion threats by outsiders create a "guardianship dilemma" for rulers: the ruler needs to empower the military to defeat the threat, but greater dependence on the military raises its capacity to stage a coup.[43] Ongoing war may improve opportunities for a coup by "expand[ing] the influence of the military,"[44] and increase motives for intervention by creating severe costs for members of the military and by increasing uncertainty about who will control the state in the future.[45] Even absent an ongoing war, a general perception of instability raises the stakes of the political game and can trigger coups by generals that perceive a greater threat from out-groups than does the incumbent ruler.

Amid such political instability, ethnic identity may no longer serve as a reliable marker for loyalty or disloyalty because even the rulers' *co-ethnics* face heightened coup incentives. Because no dictator can govern alone, rulers cannot purge all potential rivals, which can result in "reshuffling coups" by co-ethnics as distinct from "regime change" coups by members of other ethnic groups.[46]

## 2 Theory: Pre-Colonial Statehood and Ethnic Violence

Despite producing valuable insights, existing theories devote little attention to two crucial questions. First, why do ethnic differences carry extreme political importance in some countries—to the point of creating incentives for violence—but not others? Relating this consideration to the internal security dilemma, why is peaceful power-sharing possible in some countries whereas rulers face particularly high coup risk in others?

[41] Horowitz 1985.

[42] Sudduth 2017; Harkness 2018.

[43] For example, Svolik 2012, ch. 5.

[44] Finer 2002, 72.

[45] Bell and Sudduth 2017. Empirically, Bell and Sudduth 2017 and Gassebner, Gutmann and Voigt 2016 document the high relative frequency of coups during civil wars.

[46] Aksoy, Carter and Wright 2015.

Second, in circumstances of low commitment ability and high incentives to exclude, what types of groups should be best-positioned to control power at the center, and which groups face exclusion? Addressing this question should also help explain the type of violence in which a group partakes, coups or civil war. Deeper historical factors may provide insight into both questions.

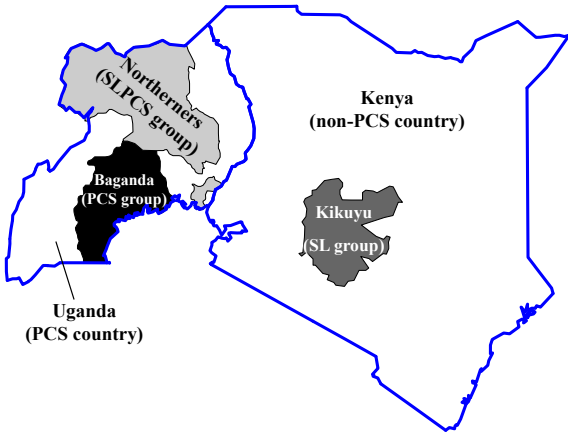
After presenting key acronyms, this section provides background on pre-colonial states through different historical periods: pre-colonial, high colonial, and decolonization. The historical background addresses these two motivating questions by grounding two key assumptions about pre-colonial state (PCS) groups and their within-country spillover effects, which raised conflict propensity for all groups in their country. First, PCS groups' negative influence on constructing inter-ethnic political institutions exacerbated rulers' commitment problems. Second, within countries containing a PCS group, historical factors privileged PCS groups over stateless groups to gain political inclusion in the central government. Combining these considerations with the coup-civil war framework proposed by Roessler and others yields the hypotheses to be tested.[47]

## 2.1 Pre-Colonial Statehood Acronyms

The remainder of the article uses the following acronyms to distinguish ethnic groups. Countries that contain at least one PCS group are "PCS countries" and those that do not are "non-PCS countries." PCS countries contain pre-colonial state ethnic groups ("PCS groups") and stateless groups ("SLPCS groups"). All ethnic groups in non-PCS countries are stateless ("SL groups"). Figure 1 illustrates the abbreviations. The Baganda in Uganda were organized under the Buganda kingdom before colonization and are a PCS group (black). Therefore, any stateless ethnic groups in Uganda, such as northern groups, are SLPCS (light gray), and Uganda is a PCS country. By contrast, there are no PCS groups in Kenya, and therefore all its groups—such as the Kikuyu—are SL (dark gray), and Kenya is a non-PCS country.

[47] Roessler 2011. Roessler and Ohls 2018 propose a different rationale for stable power-sharing: rulers will share power with numerically large groups located close to the capital because of their strong *civil war* risk if excluded, despite high coup risk if included. Below, I instead concentrate on the other side of the coup-civil war tradeoff by explaining how institutions such as inter-ethnic parties lower *coup* risk and why this facilitates power-sharing.

**Figure 1: Acronym Examples**




## 2.2 Historical Background on Pre-Colonial States

Appendix B.2 provides additional citations for individual cases referenced here.

### 2.2.1 Pre-Colonial Period (Before ∼1884)

Pre-colonial Africa featured diverse forms of political organization, ranging from stateless societies such as the Maasai in Kenya to hierarchically organized polities with standing armies such as the Dahomey in Benin.[48] Centralized states often participated in violent activities posited to promote inter-group inequality.[49] Reid argues that Africa experienced a military revolution during the 19th century that enlarged the scale and vision of political violence in many parts of the continent.[50] Ethnic groups organized as centralized states were well-positioned to create the war economies needed to profit from European guns and slave trading. The Dahomey in Benin and Baganda in Uganda gained political dominance by defeating rival states. Earlier, between 1400 and 1700, areas that contain members of a PCS group were more than twice as likely (29% to 14%) to experience at least one war.[51] Many PCS groups also participated in the continent's widespread slave trade,[52] as in Chad, Madagascar, Mali, Sudan, and Uganda, which created inequalities between the raiders and the raided. These interactions often created durable and divisive identities, as in Sudan between elite riverine Arabs and previously enslaved Africans. Salient identities among members

[48] For clarity, I use modern country names even when discussing pre-independence political units.
[49] Cederman, Gleditsch and Buhaug 2013, 33.
[50] Reid 2012, 109.
[51] Calculated by author using data presented below.
[52] Nunn and Wantchekon 2011.

of PCS groups contrasted with the many non-PCS groups that "recognized no common name and had no feeling that they belonged to a common polity," such as the Tonga in Zambia.[53]

### 2.2.2 High Colonial Period (∼1900–1945)

By elevating PCS groups in the colonial governance hierarchy, European colonial rule perpetuated—and perhaps enhanced—inter-ethnic inequalities in political power engendered by divergent political histories. This was most closely associated with British rule that favored "indirect" governance.[54] PCS groups provided natural allies because ruling through extant local political hierarchies minimized colonial administrative costs. Examples include the Asante in Ghana, Buganda in Uganda, Hausa and Fulani in Nigeria, and Lozi in Zambia. Famed British administrator Frederick Lugard originally developed the Native Authorities system—i.e., indirect rule—in northern Nigeria because the remains of the Sokoto caliphate provided a suitable bureaucratic infrastructure for governing the territory with few British officials on the ground. Indirect rule also served as a pacification strategy because favoring groups associated with pre-colonial states undermined their incentives to rebel against the colonizer, as with riverine Arabs in Sudan. Gerring et al. provide statistical evidence from a sample of British colonies that longer history as a pre-colonial state covaries with less direct colonial rule.[55]

Indirect colonial rule often enabled PCS elites to control valuable resources such as land tenure allocation and funds from Native treasuries.[56] Native self-governance also contributed to preventing cultural influences that could have undermined traditional elites, for example, influencing Britain's policy of not allowing Christian missionaries to operate in northern Nigeria or in northern Sudan, although other factors such as missionaries' desire to operate in animist-populated regions also played a role. Furthermore, although Britain often attempted to also indirectly rule stateless groups, invented colonial authorities tended to have low legitimacy and mobilization ability. For example, in Nigeria, "[w]hen the British seized power in the

[53] Colson 1969, 29.

[54] Collier 1982, 83-87 summarizes earlier debates in the literature by claiming that although some had exaggerated the difference between British indirect rule and French direct rule, there were still important distinctions—including how frequently the colonizer ruled through traditional authorities, and chiefs' role and prestige. Wucherpfennig, Hunziker and Cederman 2016 have recently discussed this debate.

[55] Gerring et al. 2011.

[56] Herbst 2000, 173-198; Posner 2005, 26-41.

north, they merely modernized an already accepted political institution. In the south, however, taxation was introduced to support a new order, which the people were prone to regard as tyrannical and antithetical to revered traditions,"[57] consistent with existing discussions of problems with attempting to "invent" political traditions in areas without a state.[58]

Although other colonizers practiced indirect rule less explicitly, the practicality of delegating governance tasks to PCS groups contributed to political inequalities among ethnic groups beyond the British empire. Within the German and then Belgian empires, Tutsi kingdoms in both Rwanda and Burundi were de facto autonomous colonies. Even France—typically associated with "direct" governance and forcibly uprooting extant political hierarchies—sometimes ruled indirectly through PCS groups, as with the Fon in southern Benin, Muslim Sahelian groups in northern Chad, and Wolof in Senegal, as Appendix Section B.2 describes. Therefore, although British indirect colonial rule should have most effectively perpetuated PCS groups' historical privileges, the historical basis for the argument extends beyond British colonies.

#### 2.2.3 Decolonization Period (post-1945)

Different patterns of political party formation that emerged during post-World War II decolonization reinforced the political salience of differences between PCS and stateless groups, engendering the fractured political arena—in some cases because of ethnopolitical exclusion, in others because of tenuous power-sharing coalitions—that post-colonial rulers inherited in most PCS countries. After 1945, Britain and France (and later Belgium) introduced or broadened elections in their African colonies. Although some political parties organized around nationalist ideals, others mirrored ethnic splits. Factions formed during the decolonization era were consequential for post-independence coalitions because political parties that won seats in the final colonial elections usually gained inclusion in the post-independence government.

Uganda exemplifies PCS groups' privileges and the difficulty of forming broad nationalist parties during the decolonization era in colonies with a PCS group, which Section 6.2 discusses. In Nigeria, an aspiring sultan of Sokoto (pre-colonial state) led the Northern People's Congress. The party's platform emphasized "the integrity of the north [and] its traditions" whereas "support for broad Nigerian concerns occupied a clear

[57] Sklar and Whitaker 1966, 21.
[58] Mamdani 1996; Ranger 2012.

second place."[59] Benin's three hegemonic regional parties split among the former Dahomey kingdom—whose leader descended from the former royal house—the Porto Novo kingdom, and the north. A divide between PCS and SLPCS groups also occurred in the form of north/south splits in Chad and in Sudan, and a coastal/highlanders split in Madagascar. Beyond electoral competition, ruling monarchies in Ethiopia, Rwanda, and Burundi also generated salient political cleavages, as did rebel group splits in Angola and Zimbabwe between PCS and non-PCS groups. These cases contrast with non-PCS colonies like Cote d'Ivoire where a single nationalist party dominated the political landscape at independence. Section 5.1 presents more systematic comparisons using data on ethnic parties during decolonization.

However, party formation is not the only channel through which PCS groups could have influenced ethnic violence. Another possibility is that PCS groups could have made "split domination" regimes—in which different ethnic groups dominate civilian and military positions[60]—more likely because PCS groups tended to dominate the bureaucracy whereas colonizers more frequently favored non-PCS groups in the military. Appendix Section B.6 provides evidence against this alternative mechanism.

## 2.3 Two Foundational Assumptions

The historical background grounds the empirical applicability of two foundational assumptions about pre-colonial states used to derive the hypotheses.

### 2.3.1 Assumption 1

The first assumption is that governments in PCS countries face a stronger commitment problem, for example, inability to commit to let rival ethnic groups retain key cabinet posts. This corresponds with the low commitment row of Table 1, in which the ruler may face a coup-civil war tradeoff.[61] This assumption also posits that PCS groups' disruptive influence created country-wide spillover effects, therefore raising the

[59] Lovejoy 1992, 43.

[60] Horowitz 1985.

[61] The analysis in the text implicitly assumes that the distribution of strong/weak types is identical in PCS and non-PCS countries, and Appendix Section B.5 explains why assuming PCS groups are more likely to be the strong type reinforces the main logic.

conflict propensity of all groups in PCS countries.[62]

Assumption 1 offers an important consideration for weakly institutionalized environments. Even in settings where the rule of law and constitutions are not well established, alternative institutions can enable political leaders to commit to bargains. In many non-PCS countries, such as Cote d'Ivoire and Kenya, rulers created nationalist parties that facilitated inter-ethnic cooperation after independence. This relates to broader contentions from the authoritarian politics literature about how party institutions can alleviate commitment problems.[63] By contrast, PCS groups inhibited inter-ethnic political institutions during the decolonization era. This decreased any ruler's ability in a PCS country to commit to bargains, regardless of whether or not members of a PCS group controlled the executive branch. Uganda, which Section 6.2 discusses in more detail, exemplifies this point: the Baganda's ethnically oriented KY party contributed to a non-cohesive political arena held together at independence by a tenuous power-sharing agreement among rival ethnic parties. In many countries, SLPCS groups responded strategically to PCS groups' organizations by creating their own ethnic-specific organizations, such as northern groups and the UPC party in Uganda.

Most directly, these considerations imply that PCS groups' disruptive influence should exacerbate inter-ethnic commitment problems. However, the internal security dilemma should persist even when one group emerged from inter-ethnic struggles controlling the most important government positions—in which case *intra*-ethnic coup attempts would constitute the main internal threat. Burundi in 1966 exemplifies the "guardianship dilemma" logic summarized in the previous section. Tutsi (PCS group) officers overthrew the Tutsi monarch in part because of disagreements regarding how to deal with the Hutu masses, which also resulted in purging Hutus from power.[64] Ongoing civil wars—often triggered in PCS countries by excluding certain ethnic groups from power—further raise coup incentives. For example, in Sudan, riverine Arabs (PCS group) have dominated power at the center since independence, but successful military coups rotated power between civilian and military regimes. Successful intra-ethnic coup attempts in 1958, 1969,

[62]The more typical assumption in ethnic civil war research is that the "treatment status" of an ethnic group is independent of treatments received by other ethnic groups in the country. Cederman, Gleditsch and Buhaug 2013; Depetris-Chauvin 2015; Wig 2016. As an exception, Lacina 2015 posits a different within-country spillover mechanism. She argues that ethnic groups are most likely to fight separatist civil wars when they have less representation in the central government than other groups residing in their territory.

[63]Svolik 2012.

[64]Lemarchand 1977, 117-121.

1985, and 1989 all stemmed from failures by the incumbent government to eliminate southern rebels and from disagreements over how to best combat the rebellions.[65] In both these cases, the general environment that created incentives for intra-ethnic coups was endogenous to the inter-ethnic strife triggered by PCS groups.

### 2.3.2 Assumption 2

The second assumption is that PCS groups' historically rooted advantages should privilege them over stateless groups in their country to achieve power at the center. In Table 1, this corresponds either to being the ruler, or to being a rival toward whom the ruler faces considerable constraints to excluding from power. In some cases, such as Sudan, PCS groups used their advantages under colonial rule to monopolize state power at independence. In other cases, such as Uganda, SLPCS groups became ascendant during the decolonization era, but the PCS group commanded government positions at independence by leveraging their privileged position in the colonial hierarchy and related organizational advantages, exemplifying a difficult-to-exclude group. Comparing between PCS countries and non-PCS countries, PCS groups' dominance in the colonial hierarchy often came at the expense of stateless groups in their country, implying that SLPCS groups should face greater impediments to accessing power at the center than SL groups.

## 2.4 Hypotheses: Combining the Strategic Logic and Historical Facts

Combining the historically based assumptions with the logic of the coup-civil war tradeoff proposed in Roessler and related research yields the hypotheses,[66] and Appendix Section B.4 presents a simple game that formalizes the logic. Assumption 1 implies that any ethnic group in a PCS *country* should engage in political violence—either civil wars or coups—more frequently than a group in a non-PCS country because governments in PCS countries should have low commitment ability (top row in Table 1). Assumption 2 explains the form that violence should take within PCS countries, differentiating PCS and SLPCS groups. PCS groups' historical privileges imply that, when they engage in violence, they should frequently use the insider technology of coups d'état (and, related, they should also enjoy a favorable position to succeed at coups). By contrast, SLPCS groups' lack of such privileges should make their members easier to dislodge

[65] Bechtold 1990, 582, 592; Tartter 1992, 234-237.

[66] Roessler 2011, 2016.

from power—given strategic incentives for exclusion in PCS countries—which should associate SLPCS groups with civil wars.

Crucially, the posited within-country spillover effects of PCS groups—raising conflict propensity for *all* groups within their country—implies that the relevant comparison for PCS groups and for SLPCS groups is to SL groups. Therefore, theoretical considerations require disaggregating stateless groups by whether or not any PCS groups reside in their country. If the theory is correct, then comparing PCS groups to SLPCS groups would suggest that pre-colonial statehood exerts *pacifying* effects with regard to civil wars by ignoring within-country spillover effects. This logic yields the two main hypotheses:

> **Hypothesis 1.** *SLPCS groups should participate in civil wars more frequently than SL groups.*
>
> **Hypothesis 2.** *PCS groups should participate in coups (attempted and successful) more frequently than SL groups.*

The theoretical building blocks for the two main hypotheses yield secondary hypotheses. SLPCS groups should face two disadvantages for accessing power at the center relative to SL groups. First, low government commitment ability in PCS countries creates strategic exclusion incentives (Assumption 1). Second, SLPCS groups tended to be disadvantaged in the colonial hierarchy, which restricted their access to power (Assumption 2).

> **Hypothesis 3.** *SLPCS groups should gain inclusion in power at the center less frequently than SL groups.*

Comparing PCS groups to SL groups does not not yield a corollary to H3. Despite strategic exclusion incentives in PCS countries (Assumption 1), PCS groups' historical advantages summarized in Assumption 2 yield ambiguous expectations for whether PCS or SL groups should more frequently access power at the center.

Appendix Section B.3 presents additional hypotheses that predict coups and civil war conditional on ethnopolitical representation status, explaining why both PCS groups and SLPCS groups should more frequently initiate civil wars than SL groups conditional on exclusion (Hypotheses 4 and 5), and why PCS groups should more frequently launch coups than SL groups conditional on inclusion (Hypothesis 6).

# 3 Data and Empirical Setup

## 3.1 Sample

The unit of analysis in the main regression specifications is ethnic group-years. The Ethnic Power Relations database (EPR) codes politically relevant ethnic groups and their access to power in the central government for all years between 1946 (or the country's year of independence, if later) and 2013, and provides the ethnic group units used in the present study.[67] Appendix Section C.1 lists African countries missing EPR data, most of which are small countries that do not meet key scope conditions of the theory by not having an indigenous population or by lacking multiple ethnic groups that can compete for power. Robustness checks analyze two particularly theoretically relevant subsamples: ex-British colonies, and the Cold War era. The posited colonial mechanisms are most relevant for ex-British colonies because Britain was more likely to rule indirectly through PCS groups' established political hierarchies. Furthermore, the focus on events leading up to independence suggest the mechanisms should most likely operate earlier in the post-colonial era. Other appendix tables stratify on ethnopolitical inclusion status.

## 3.2 Pre-Colonial States

Defining states has posed difficulties for social scientists, including anthropologists that have long debated how to classify states in pre-colonial Africa.[68] Even pre-colonial African polities that exhibited hierarchical organization pose classification challenges when considering "stateness" traits used by social scientists to explain historical state formation in other regions. African rulers and the African state system as a whole placed lower emphasis on territorial sovereignty than did early modern Western Europe.[69] Even highly centralized states by African standards usually possessed rudimentary political institutions compared to contemporary Asian agrarian empires.[70]

[67] Vogt et al. 2015. "We classify an ethnic group as politically relevant if at least one political organization claims to represent it in national politics or if its members are subjected to state-led political discrimination." Cederman, Wimmer and Min 2010, 99.

[68] Southall 1974; McIntosh 2005.

[69] Warner 2001.

[70] Kohli 2004, 297.

### 3.2.1 Coding PCS Groups

Acknowledging these difficulties, I coded an EPR ethnic group as having a pre-colonial state if co-ethnics governed a substantial percentage of members of the EPR ethnic group through a single or small number of political organizations that exhibited some degree of centralized rule on the eve of colonization. Although the working definition of a state is minimal, the paucity of reliable historical information for most pre-colonial African political organizations makes it difficult or perhaps impossible to operationalize a conceptual definition that requires more nuanced information about the degree of or origins of centralization for each group. I restrict attention to states that existed at the eve of colonization because the theory posits that pre-colonial states' influence on colonial policies is a key persistence mechanism.[71]

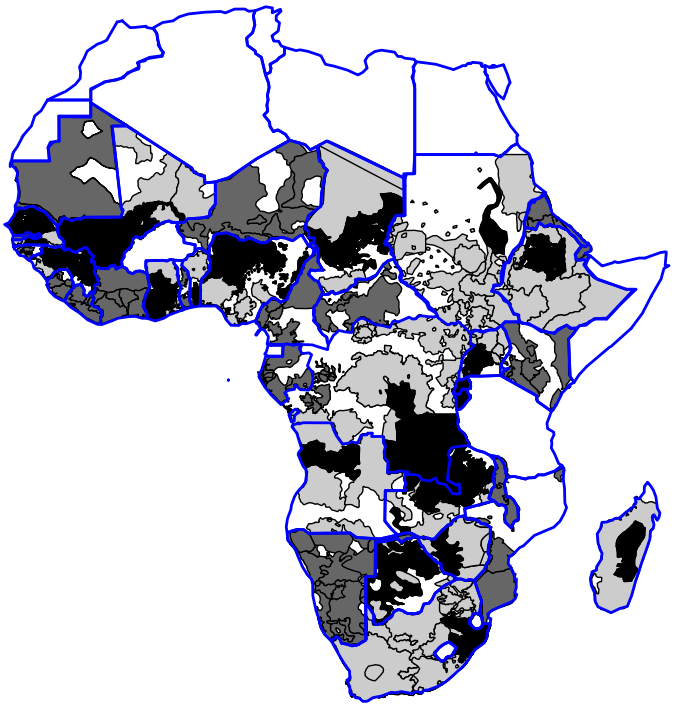
Constructing the dataset proceeded in three main steps that Appendix A details along with country-by-country coding justifications. First, I consulted 11 continent-wide maps of historical states and other sources (including Murdock) to generate a list of candidate states.[72] Second, I used additional secondary sources to match candidate states with EPR ethnic groups to generate a list of candidate PCS groups. Third, I examined four conditions that correspond with the working definition of pre-colonial states to determine which candidate groups to code as PCS: (1) co-ethnic governance requires the state was independent rather than tributary, (2) some evidence of central authority such as acknowledged hierarchy of authority in regions outside the capital and centralized tax collection, as opposed to nomadic confederations or trading centers, (3) one (or a small number of) states governed a substantial percentage of members of the EPR ethnic group, as opposed to groups such as Yoruba in Nigeria or Bamileke in Cameroon that were fractured into dozens or hundreds of mini-states, and (4) these conditions held on the eve of colonization. In total, I consulted over 100 secondary sources to code the PCS variable, which Figure 2 depicts. It uses the same color scheme as Figure 1: PCS groups in black, SLPCS groups in light gray, and SL groups in dark gray. Appendix Table A.2 lists every PCS group and PCS country.

Robustness checks evaluate alternative PCS measures that narrow the statehood definition. First, the main

[71] This coding decision also reflects practical considerations. Information about pre-colonial states in Africa becomes even sparser in periods predating the eve of colonization. Additionally, suppose groups with a state that collapsed before the eve of colonization—therefore coded as stateless—exhibited similar tendencies as PCS groups. Then this coding procedure should *underestimate* PCS effects.

[72] Murdock 1967.

**Figure 2: PCS Groups in Sub-Saharan Africa**



*Notes*: The sample does not include entirely white countries, as Appendix Section C.1 discusses. Other white spots correspond with territory lacking any politically relevant EPR groups. Ethnic groups in Eritrea are SLPCS prior to 1993 because they belonged to Ethiopia.

measure codes groups like the Tswana in Botswana that exhibited characteristics of centralized rule but were not organized into a single state as PCS if a small number of states governed members of the modern ethnic group, especially if one state was clearly ascendant. The first alternative PCS measure codes groups like the Tswana as non-PCS by changing the third operational criterion. Appendix Table A.2 denotes these groups with an asterisk. Second, the eve-of-colonization criterion poses ambiguities for states that experienced early major colonial interference (pre-1870), such as Egypt's takeover of central Sudan, Portuguese penetration of the Kasanje and Matamba states in Angola, and France's incursion into Senegambia. Appendix Table A.2 denotes these groups with a dagger, which the second alternative PCS measure codes as non-PCS by changing the fourth coding criterion (also see the more detailed coding rules in Appendix A).

Two reasons motivate a binary variable rather than an ordinal or continuous PCS measure. First, conditional on a PCS group being large enough to potentially disrupt creating nationally oriented political organizations,[73] the theory does not address PCS groups' size. Perhaps larger PCS groups monotonically imply less

[73]Only in the Democratic Republic of the Congo is the largest PCS group less than 10% of country's

ability to cooperate, or perhaps there is a non-monotonic effect in which very large PCS groups achieve sufficient support to mitigate the posited sources of bargaining failure. The mostly peaceful PCS countries Botswana, Guinea, Senegal, and Zambia (see Section 6) each feature a PCS group composing at least 40% of its country's total population. Although intriguing to consider in future research, I prefer a simpler measure that directly assesses the present hypotheses. Second, at the country level, having at least one PCS group or not is the key theoretical distinction. Conditional on having at least one, the number of PCS groups should be unimportant because even one PCS group should create conditions for ethnic violence. The theory does not suggest that multiple PCS groups would necessarily cause more violence.

### 3.2.2 Improvements Over Existing Measures

Despite numerous important research questions to which existing measures of historical political centralization contribute,[74] properly assessing the present hypotheses requires a new measure. Bockstette et al. code a territory's history of state-like institutions dating back over two millennia to the year 0 CE. Their dataset uses modern country boundaries as the unit of analysis, which precludes assessing ethnic group behavior.[75]

Murdock's *Ethnographic Atlas* codes an ordinal political "jurisdictional hierarchy" variable at the ethnic group level on the eve of colonization,[76] used widely in the literature. A score of 3 or 4 indicates a large state, the analog to the present conceptualization of pre-colonial states. However, this variable exhibits three main drawbacks for studying political violence (see also Appendix Section A.3). First, verifying Murdock's data using additional secondary sources—as the present coding exercise does—reveals considerable questionably coded cases. Among the 35 Murdock ethnic groups coded as large states (located in countries in the present sample), only 40% correspond with a group coded as PCS here. Although an additional four groups had centralized institutions but no corresponding EPR group, nearly half of the Murdock state groups either exhibit no evidence of centralized institutions (29%) or governed states that had declined considerably by the 19th century (20%), which Appendix Table A.5 shows. Conversely, among the 28 EPR ethnic groups that the present dataset codes as governing a historical state—PCS groups—only 50% correspond with a Murdock

population (Luba-Kasai, 7%), and the median size of the largest PCS group in PCS countries is 27%.

[74] For example, Murdock 1967; Bockstette, Chanda and Putterman 2002.

[75] Bockstette, Chanda and Putterman 2002.

[76] Murdock 1967.

state group (Appendix Table A.3). Although the present measure is not perfect, the extent of disagreement is striking. Furthermore, whereas country-by-country scorings for the current measure presented in Appendix A allow researchers to easily examine every coding decision for the current PCS variable, Murdock contains a terse reference list and coding justifications.[77]

Second, researchers cannot directly use Murdock ethnic group units for conflict analysis because no dataset codes civil wars and coups to correspond with his dataset. Depetris-Chauvin matches ACLED's highly disaggregated civil war data with African ethnic groups,[78] but these conflict data are available only since 1997 and therefore cannot convincingly assess a historical factor posited—at least in the present theory—to most strongly affect outcomes closer to independence. Furthermore, existing research on ethnic conflict demonstrates the importance of focusing on *politically relevant* ethnic groups,[79] and many of Murdock's groups lack political relevance.

Third, although it is possible to systematically match Murdock ethnic groups with EPR ethnic groups, merging the two is quite difficult and compounds measurement problems with Murdock's original variable. For the entire African continent, Murdock's map of ethnic group location contains 843 tribal areas,[80] of which 441 have a corresponding ethnic group in *Ethnographic Atlas*,[81] compared to 254 politically relevant EPR ethnic groups in Africa with location polygons. In some cases, Murdock and EPR groups match one-to-one and in other cases an EPR group aggregates multiple Murdock groups, but many EPR groups lack a corresponding Murdock group (even when accounting for multiple names and English translations). In other cases, a Murdock group matches the EPR group, but international borders partition a group that ruled a pre-colonial state in one modern country, but not others. For example, Murdock codes "Ruanda" as a large state—accurate for Rwandan Tutsi, but not for Tutsi in DRC or Banyarwanda in Uganda.

The appendix further evaluates problems with matching Murdock and EPR by comparing Wig's data,[82] who advanced the literature by systematically combining the two, with mine. Based primarily on group names

[77] Murdock 1967.

[78] Depetris-Chauvin 2015; Raleigh et al. 2010.

[79] Cederman, Gleditsch and Buhaug 2013.

[80] Murdock 1959.

[81] Murdock 1967. Michalopoulos and Papaioannou 2013 merge the groups from Murdock's map and his *Ethnographic Atlas*.

[82] Wig 2016.

and location, he assigns at least one Murdock group to almost every EPR group in Africa, therefore also assigning a Murdock jurisdictional hierarchy score. However, among EPR groups in the present sample—using a binary Murdock pre-colonial state variable that equals 1 if the group's matched jurisdictional hierarchy is 3 or 4, and 0 otherwise—the correlation between PCS and Murdock/Wig is only 0.33. Among PCS groups, only 43% are states on the binary Murdock/Wig measure (Appendix Table A.3), and the converse percentage is only 38% (Table A.4). Overall, despite conceptual similarities, the present measure differs from and improves considerably upon Murdock.

### 3.3 Dependent Variables

Most regression tables examine two civil war measures. I coded ethnic group-level civil war onset by assigning Fearon and Laitin's major civil wars (at least 1,000 battle deaths during the conflict) to EPR ethnic groups primarily using ACD2EPR, which codes ethnic wars as involving ethnic-specific recruitment and war aims.[83] Appendix Section C.2 elaborates upon the coding procedure. I additionally examine Roessler's and Roessler and Ohls' civil war onset variable,[84] which also measures group-level major conflicts but does not require ethnic-specific rebellion aims (hence, "ethnic participation"). Robustness checks examine ACD2EPR's measure, which uses a lower death threshold.[85]

The regression tables also analyze successful and attempted coups d'etat.[86] A robustness check examines participation in irregular inter-ethnic regime changes. Successful coups are appropriate to analyze because the theory anticipates that PCS groups' greater access to power at the center should enable *succeeding* at coups in addition to launching them. Successful coups can also be measured with less error than failed coups, which Appendix Section C.3 discusses. All variables run through 2013.

### 3.4 Origins of Pre-Colonial Statehood Covariates

No process randomly assigned pre-colonial states. Although no silver bullet research design can completely solve this fundamental causal inference concern, the statistical models control for posited causes of state

[83] Fearon and Laitin 2003; Vogt et al. 2015.
[84] Roessler 2011; Roessler and Ohls 2018.
[85] Vogt et al. 2015.
[86] Roessler 2011; Roessler and Ohls 2018 measure these variables at the ethnic group level.

formation in pre-colonial Africa and for alternative explanations of civil wars and coups, in addition to numerous robustness checks. Appendix Section C.4 details every covariate.

A growing social scientific literature examines causes of state formation in pre-colonial Africa. Much of this research applies factors proposed in research on European state formation—population density, trade, and warfare—and analyzes their applicability to Africa.[87] Studies using ethnic group-level data have shown that pre-colonial states were more likely to emerge in territories exhibiting greater ecological diversity, which promoted trade,[88] and with lower tsetse fly prevalence, which facilitated higher population density.[89] At the country level, Nunn demonstrates a negative correlation between slave exports and political centralization.[90] Others examine long-term effects of historical warfare in Africa, albeit without directly analyzing effects on pre-colonial state formation.[91] In a broader sample, Putterman shows a strong relationship between timing of a territory's Neolithic revolution and historical state development.[92] Each regression table accounts for these possible determinants of pre-colonial statehood by including specifications with and without the five pre-colonial covariates: ecological diversity, tsetse fly, slave exports, historical warfare, and Neolithic timing.

### 3.5 Standard Conflict Covariates

Each table also evaluates specifications that include the following seven covariates, which are commonly examined in studies of civil war and coups: at the country level, income per capita, population, democracy level, and geographic constraints to broadcasting power; and at the ethnic group level, share of the national population, distance from the capital city, and presence of a giant oil field. Although some state for-

[87] Osafo-Kwaako and Robinson 2013, 7-8.

[88] Fenske 2014.

[89] Alsan 2015.

[90] Nunn 2008.

[91] Besley and Reynal-Querol 2014; Dincecco, Fenske and Onorato 2016.

[92] Putterman 2008. However, Osafo-Kwaako and Robinson's 2013 evidence qualifies our knowledge about causes of pre-colonial African state formation. Testing many anthropologists' contentions that Eurocentric state formation models are inapplicable to Africa, they show null correlations between pre-colonial centralization and factors related to each of population density, trade, and warfare in a sample of African ethnic groups.

mation and standard conflict covariates raise post-treatment bias issues, each table includes specifications with and without different combinations of covariates to show the results do not hinge on a single set of covariates.

### 3.6 Statistical Models

Following standard practice in the ethnic civil war literature, the models contain a panel of ethnic group years.[93] The main regression tables estimate logistic regressions:

$$\ln\left(\frac{Y_{it}}{1-Y_{it}}\right) = \beta_0 + \beta_P \cdot P_i + \beta_S \cdot S_i + \boldsymbol{X}'_{it}\beta_X + \boldsymbol{T}'_{it}\beta_T + \epsilon_{it}, \tag{1}$$

where $Y_{it}$ is an indicator variable for ethnic civil war onset (with years of ongoing civil war dropped) or successful coup attempt, $P_i$ indicates PCS groups, $S_i$ indicates SLPCS groups, $\beta_P$ and $\beta_S$ are the main parameters of interest, and $\boldsymbol{X}_{it}$ is a vector of covariates that differs by column. The vector $\boldsymbol{T}_{it}$ contains standard event history controls for civil wars or coups—years since the last with civil war incidence or years since last coup, and cubic splines—plus lagged country-level civil war incidence in the civil war regressions. I cluster the standard errors at the ethnic group level.

Importantly, the main specifications do not include country fixed effects.[94] A key premise of the theory is that PCS groups cause within-country spillover effects that should raise violence propensity for all groups in PCS countries, which necessitates comparing groups in PCS countries to stateless groups in *non*-PCS countries (SL groups), as the hypotheses state. The main civil war hypothesis (H1), for example, concerns *stateless* groups in PCS countries because PCS groups tended to exclude SLPCS groups from power. Therefore, within-country comparisons generated by modeling country fixed effects would not provide a valid test of the main hypotheses. This distinguishes the present analysis from existing statistical studies on pre-

[93] For example, Cederman, Gleditsch and Buhaug 2013, 73. The panel structure is appropriate because the sample of politically relevant ethnic groups changes over time. Furthermore, some covariates and conditioning variables are time-varying. However, robustness checks show similar results when analyzing cross-sectional data.

[94] Nor do any models include ethnic group fixed effects, because the PCS, SLPCS, and SL indicators are time-invariant.

colonial statehood and civil war that use a subnational unit of analysis and include country fixed effects in every regression model.[95]

# 4 Pre-Colonial Statehood and Ethnic Violence

## 4.1 Main Results

Tables 2 and 3 support the main hypotheses. Every column contains the two PCS indicators—leaving SL groups as the omitted basis category—and event history controls. Table 2 assesses H1 by examining ethnic civil war onset in Columns 1 through 4 and onset of ethnic group participation in civil war (the Roessler measure) in Columns 5 through 8.[96] Table 3 assesses H2 by examining successful coup attempts in Columns 1 through 4 and all coup attempts in Columns 5 through 8. The first column for each dependent variable (1 and 5) does not add additional covariates.

The estimates from Column 1 of Table 2 show that SLPCS groups participated in civil wars 4.9 times more frequently than SL groups, in 0.70% of ethnic group years compared to 0.14%.[97] PCS groups participated in civil wars 2.3 times more frequently than SL groups, in 0.32% of ethnic group years. Analyzing raw trends in the data demonstrates that, quite simply, SL groups have rarely initiated civil wars. The first major ethnic civil war in a non-PCS country occurred in 1989 in Liberia. In total, only six major ethnic group-level onsets occurred in non-PCS countries between independence and 2013. This compares to 49 group-level onsets in PCS countries, including 30 through 1989. The relative onset frequencies are similar for the Roessler civil war variable in Column 5: 1.16% for SLPCS groups, 0.86% for PCS groups, and 0.34% for SL groups.

The estimates from Column 1 of Table 3 shows that PCS groups participated in successful coups 2.2 times more frequently than SL groups, in 1.54% of ethnic group years compared to 0.70%. Column 5 shows respective frequencies of 2.42% and 1.28% for coup attempts. By contrast, SLPCS groups participated in both successful and all coup attempts less frequently than SL groups, which corresponds with SLPCS groups' in-

[95] Wig 2016; Depetris-Chauvin 2015.

[96] Roessler 2011.

[97] Every reported predicted probability fixes the event history controls at their mean values, and the other PCS country category at 0.

**Table 2: Main Civil War Results**

| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.814 | 0.865 | 0.782 | 0.942 | 0.929** | 0.899* | 1.086** | 0.991** |
| | (0.575) | (0.592) | (0.606) | (0.667) | (0.441) | (0.473) | (0.444) | (0.489) |
| SLPCS group | 1.588*** | 1.621*** | 1.508*** | 1.652*** | 1.230*** | 1.204*** | 1.297*** | 1.238*** |
| | (0.449) | (0.432) | (0.439) | (0.511) | (0.347) | (0.342) | (0.377) | (0.383) |
| Group % of pop. | | | 0.230 | -0.398 | | | -0.157 | -0.581 |
| | | | (1.005) | (0.791) | | | (1.189) | (1.029) |
| Distance from capital | | | 0.0593 | 0.0377 | | | 0.110** | 0.126*** |
| | | | (0.0537) | (0.0578) | | | (0.0436) | (0.0452) |
| Herbst geography | | | 0.158 | 0.284 | | | -0.00696 | -0.109 |
| | | | (0.202) | (0.213) | | | (0.169) | (0.175) |
| Giant oil field | | | 0.774 | 1.726*** | | | 0.324 | 0.861 |
| | | | (0.625) | (0.634) | | | (0.574) | (0.572) |
| Democracy | | | -0.0661** | -0.0601** | | | -0.0415* | -0.0340 |
| | | | (0.0300) | (0.0273) | | | (0.0248) | (0.0261) |
| ln(GDP/capita) | | | -0.474* | -0.651** | | | -0.553*** | -0.597*** |
| | | | (0.275) | (0.310) | | | (0.198) | (0.206) |
| ln(Population) | | | -0.179 | -0.361 | | | -0.261 | -0.309* |
| | | | (0.246) | (0.307) | | | (0.168) | (0.170) |
| Tsetse fly | | -0.561 | | -0.612 | | -0.868 | | -1.499 |
| | | (1.180) | | (1.248) | | (1.129) | | (1.001) |
| Neolithic transition | | 0.512*** | | 0.521*** | | 0.309** | | 0.280* |
| | | (0.154) | | (0.142) | | (0.148) | | (0.159) |
| Ecological diversity | | 0.236 | | -0.0390 | | 0.607 | | 0.683 |
| | | (0.727) | | (0.767) | | (0.691) | | (0.712) |
| Slave exports | | -0.0784 | | -0.182*** | | -0.00622 | | -0.0319 |
| | | (0.0613) | | (0.0662) | | (0.0641) | | (0.0608) |
| Historical warfare | | -0.00101 | | 0.213 | | -0.366 | | 0.133 |
| | | (0.443) | | (0.436) | | (0.430) | | (0.452) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Table 2 summarizes logistic regression estimates with ethnic group-clustered standard errors in parentheses. Section 3 describes the data.$^{***}p < 0.01$,$^{**}p < 0.05$,$^{*}p < 0.1$.

frequent access to political power (see Table 6). Although PCS groups and SL groups participated in roughly the same *number* of successful coups between independence and 2013—31 versus 29, respectively—the percentage difference arises because PCS groups infrequently appear in the sample relative to SL groups (see Appendix Table C.2).

Adding different sets of control variables does not change the main findings in Tables 2 and 3. Columns 2 and 6 add to the baseline specification the five predictors of African state formation discussed in Section 3.4, Columns 3 and 7 add to the baseline specification the seven standard conflict covariates discussed in Section 3.5, and Columns 4 and 8 include all controls. The relationships between SLPCS groups and civil wars, and between PCS groups and coups, are statistically significant at 5% in most specifications, although the p-value for PCS groups rises above 0.05 in two coup attempt regressions.

**Table 3: Main Coup Results**

| | DV: Successful coup | | | | DV: Coup attempt | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.802*** | 0.845** | 0.714** | 1.026** | 0.646** | 0.632* | 0.529* | 0.773** |
| | (0.310) | (0.395) | (0.302) | (0.407) | (0.281) | (0.332) | (0.293) | (0.345) |
| SLPCS group | -0.481 | -0.502 | -0.270 | -0.0402 | -0.390 | -0.485 | -0.246 | -0.0945 |
| | (0.368) | (0.430) | (0.403) | (0.469) | (0.265) | (0.310) | (0.288) | (0.322) |
| Group % of pop. | | | 1.091** | 1.691*** | | | 1.100** | 1.693*** |
| | | | (0.502) | (0.542) | | | (0.469) | (0.476) |
| Distance from capital | | | -0.0775 | -0.103 | | | -0.0588 | -0.0705 |
| | | | (0.0658) | (0.0831) | | | (0.0572) | (0.0600) |
| Herbst geography | | | -0.0621 | -0.0512 | | | -0.0574 | -0.126 |
| | | | (0.153) | (0.165) | | | (0.157) | (0.141) |
| Giant oil field | | | -0.641 | -0.521 | | | -0.722 | -0.654 |
| | | | (0.934) | (0.945) | | | (0.647) | (0.589) |
| Democracy | | | -0.0334* | -0.0187 | | | -0.0380** | -0.0225 |
| | | | (0.0174) | (0.0166) | | | (0.0162) | (0.0159) |
| ln(GDP/capita) | | | -0.447** | -0.469** | | | -0.242* | -0.158 |
| | | | (0.182) | (0.212) | | | (0.143) | (0.168) |
| ln(Population) | | | 0.0178 | -0.0318 | | | 0.0815 | 0.0814 |
| | | | (0.181) | (0.194) | | | (0.121) | (0.140) |
| Tsetse fly | | 1.184 | | 2.424* | | 0.965 | | 1.546 |
| | | (1.127) | | (1.469) | | (0.851) | | (1.030) |
| Neolithic transition | | 0.424*** | | 0.541*** | | 0.409*** | | 0.506*** |
| | | (0.118) | | (0.167) | | (0.109) | | (0.135) |
| Ecological diversity | | -0.599 | | -0.640 | | 0.0874 | | 0.123 |
| | | (0.680) | | (0.753) | | (0.560) | | (0.590) |
| Slave exports | | 0.0539 | | 0.0478 | | 0.0483 | | 0.0563 |
| | | (0.0708) | | (0.0633) | | (0.0560) | | (0.0506) |
| Historical warfare | | 0.283 | | -0.0498 | | 0.0687 | | -0.290 |
| | | (0.275) | | (0.284) | | (0.245) | | (0.255) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Table 3 summarizes logistic regression estimates with ethnic group-clustered standard errors in parentheses. Section 3 describes the data. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Intriguingly, although the coefficient estimate for PCS groups is positive in every civil war specification, it is only statistically significant when analyzing ethnic participation in war (Columns 5 through 8) rather rebellions with ethnic aims (Columns 1 through 4). Although only a small number of war onsets differentiate the two measures, cases such as Baganda in Uganda (two war onsets in the 1980s, but neither proclaimed ethnic-specific aims) suggest that after being forced from power, PCS groups might become willing to forge broader coalitions to regain power. Overall, however, the theoretical expectations for PCS groups and civil wars are ambiguous. Although PCS groups should rebel frequently when excluded (see Appendix Section B.3 for H4), their historical advantages for gaining access to power (Assumption 2) should diminish reliance on outsider rebellions.

Regarding other covariates, democracy and GDP per capita enter negatively, and statistically significantly

in many specifications, consistent with existing arguments. Group percentage of the population positively covaries with coups, as expected because group size and political inclusion positively correlate (see Table 6). Finally, a longer period since a country transitioned to agricultural production positively covaries with civil wars and coups, which may be intriguing to analyze in future research because the typical assumption in related research is that Neolithic transition timing influenced modern outcomes by affecting pre-colonial statehood.[98]

### 4.2 Additional Robustness Checks

Appendix Section D.1 conducts a battery of robustness checks that include jackknife sample sensitivity analysis, estimating the bias of selection on unobservables from selection on observables, changing the dependent variables and PCS measures, and changing the statistical models. Section D.2 engages debates about border formation and "dismembered" ethnic groups in Africa by showing similar results even when limiting the sample to ethnic groups partitioned across international boundaries and modeling transnational ethnic group fixed effects.[99] Section D.3 disaggregates two theoretically relevant subsamples, showing the main results are particularly strong among ex-British colonies and during the Cold War era.

## 5 Evidence for Intervening Implications

This section assesses intervening implications of the theory by providing a series of secondary tests that assess ethnic parties at independence (Assumption 1), and that predict or condition on ethnopolitical inclusion (Hypotheses 3 through 6).

### 5.1 Ethnic Parties at Independence

A key posited historical legacy is that PCS groups promoted ethnic parties at the expense of inter-ethnic and nationalist-oriented political parties, which motivates Assumption 1. Tables 4 and 5 statistically support this argument. In Table 4, the unit of analysis is country and the dependent variable is ethnic parties' vote

[98] Putterman 2008.

[99] Englebert, Tarango and Carter 2002; Michalopoulos and Papaioannou 2016.

share in the final decolonization election.[100] Harkness codes this variable using Chandra's coding rules for ethnic parties.[101] The main explanatory variable is an indicator for PCS countries. Column 1 runs a bivariate regression, and Column 2 adds every country-level covariate from Tables 2 and 3 plus an indicator for British colonialism. In both columns, the coefficient estimate for PCS country is positive and statistically significant. The coefficient estimates are also large in magnitude: ethnic parties received 47% of the total vote share in the final pre-independence elections in PCS countries, compared to 17% in non-PCS countries. The PCS country indicator also nearly perfectly predicts countries in which an ethnic party governed at independence: the only counterexample is non-PCS Sierra Leone, compared to eight PCS countries (Angola, Benin, Chad, Nigeria, Rwanda, Sudan, Uganda, and Zimbabwe).

**Table 4: Ethnic Parties During Decolonization: Country-Level Evidence**

| | DV: Ethnic party vote % | |
|---|---|---|
| | (1) | (2) |
| PCS country | 35.76*** | 35.33** |
| | (11.60) | (14.94) |
| Years since Neolithic transition | | 0.00368 |
| | | (0.00731) |
| ln(Slave exports/area) | | 0.645 |
| | | (2.558) |
| Herbst difficult geography index | | 1.712 |
| | | (6.600) |
| ln(Population) in 1950 | | -0.737 |
| | | (7.027) |
| ln(GDP/capita) in 1950 | | 14.20 |
| | | (11.18) |
| British colony | | 16.88 |
| | | (13.94) |
| Countries | 33 | 33 |
| R-squared | 0.213 | 0.299 |

*Notes*: Table 4 summarizes OLS regressions with robust standard errors in parentheses, using a cross-section of countries with available ethnic vote share data. Section 3 describes the explanatory variables. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table 5 changes the unit of analysis to ethnic groups. The dependent variable indicates for each ethnic group representation by an ethnic party that received a positive percentage of votes in the final pre-independence

[100] The sample excludes never-colonized Ethiopia and Liberia, and Djibouti and Eritrea. It includes cases such as former Portuguese colonies that did not have elections, but for which it is possible to code the dependent variable given Harkness' 2018 ethnic coding of the rebel groups. However, the (unreported) results are very similar when excluding every major violent liberation war case (which also includes Zimbabwe, South Africa, and Namibia).

[101] Harkness 2018; Chandra 2011.

election.[102] Panel A includes all politically relevant ethnic groups in each country's first year of independence (see Appendix Tables D.6 and D.7), except groups from the four countries that Table 4 excludes, and Panel B only includes groups that compose at least 10% of the country's population.

PCS groups' distinctiveness is stark: in Column 1 of Panel A, the predicted probability of an ethnic party is 52% for PCS groups, 22% for SLPCS groups, and 13% for SL groups. Stateless groups are somewhat more heterogenous than PCS groups in terms of their size and political clout, which perhaps explains the null coefficient estimate for SLPCS groups in Panel A. However, when conditioning on larger ethnic groups that could more reasonably have sought to exert considerable influence in the political arena (Panel B), SLPCS groups exhibit statistically distinguishable behavior from SL groups—consistent with the argument that actions by PCS groups to undermine nationalist-oriented parties triggered responses by other groups. In Column 1 of Panel B, the predicted probability of an ethnic party is 59% for PCS groups, 48% for SLPCS groups, and 18% for SL groups. Related, in 10 of 13 PCS countries in which a PCS group formed an ethnic party (out of 18 PCS countries in the sample), at least one SLPCS group also formed an ethnic party.

**Table 5: Ethnic Parties During Decolonization: Ethnic Group-Level Evidence**

| | DV: Ethnic party indicator | | | |
|---|---|---|---|---|
| | Panel A. All groups | | | |
| | (1) | (2) | (3) | (4) |
| PCS group | 1.984*** | 1.790*** | 2.070*** | 2.058*** |
| | (0.542) | (0.613) | (0.611) | (0.733) |
| SLPCS group | 0.637 | 0.498 | 0.816 | 0.778 |
| | (0.486) | (0.526) | (0.612) | (0.713) |
| Ethnic groups | 153 | 153 | 153 | 153 |
| PCS origins covariates? | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES |
| | Panel B. Groups >10% of pop. | | | |
| | (1) | (2) | (3) | (4) |
| PCS group | 1.918*** | 1.966*** | 2.281*** | 2.728*** |
| | (0.604) | (0.727) | (0.695) | (0.883) |
| SLPCS group | 1.471** | 1.395** | 1.628** | 1.784* |
| | (0.581) | (0.657) | (0.747) | (0.922) |
| Observations | 87 | 87 | 87 | 87 |
| PCS origins covariates? | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES |

*Notes*: Table 5 summarizes logistic regression estimates with robust standard errors in parentheses, using a cross-section of ethnic groups with available ethnic party data. Section 3 describes the explanatory variables, and the covariates in different columns correspond with Tables 2 and 3. The sample in Panel B only include ethnic groups that compose at least 10% of their country's population. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

[102] Coded by the author using Harkness' 2018 appendix.

## 5.2 Predicting or Conditioning on Ethnopolitical Inclusion

Statistical evidence supports the secondary Hypotheses 3 through 6, which either predict or condition on ethnopolitical inclusion. These results relate to three findings from the literature. First, few studies endogenize ethnopolitical representation status. Wucherpfennig et al. examine distance from the coast and colonizer identity,[103] and the present findings contribute to this small but important research agenda. Second, whereas Roessler shows that ethnopolitical exclusion covaries positively with civil war onset and negatively with successful coups,[104] the present findings show that pre-colonial statehood explains variance in ethnic violence even when stratifying on access to central power. Third, the results yield an opposing finding from Wig by showing that, conditional on exclusion, PCS groups rebel more often than SL groups.[105] As discussed above, these differences arise in the present study because (1) PCS groups are not compared to stateless groups in their own country and (2) the present PCS variable should exhibit less measurement error than combining Murdock's jurisdictional hierarchy variable with EPR data.[106]

Table 6 analyzes ethnopolitical inclusion (H3) using EPR data.[107] A group-year is coded as 1 on the ethnopolitical inclusion variable if it scores "monopoly," "dominant," "senior partner," or "junior partner" on EPR's political status variable; and 0 otherwise. For all four values, the group commands either the presidency or at least cabinet positions in the administration.[108] Using the same covariate groupings as in Tables 2 and 3, the four columns in Table 6 support Hypothesis 3 by demonstrating the rarity of ethnopolitical inclusion for SLPCS groups relative to SL groups. In Column 1, the predicted probability for inclusion is 41% for a SLPCS group and 70% for a SL group (and 76% for PCS groups). The difference between SLPCS and SL groups is statistically significant in all specifications.

Appendix Section D.4 assesses the three conditional civil war and coup hypotheses presented in Section B.3. They provide evidence that both PCS and SLPCS groups are more likely to rebel than SL groups conditional on exclusion, and PCS groups are more likely than SL groups to participate in coups conditional on inclusion. Although the primary purpose of these regressions is to assess the conditional hypotheses, they

[103] Wucherpfennig, Hunziker and Cederman 2016.
[104] Roessler 2011.
[105] Wig 2016.
[106] Murdock 1967.
[107] Vogt et al. 2015.
[108] Cederman, Wimmer and Min 2010, 99-101.

**Table 6: Ethnopolitical Inclusion**

| | DV: Ethnopolitical inclusion | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| PCS group | 0.279 | 0.203 | 0.273 | 0.390 |
| | (0.388) | (0.418) | (0.399) | (0.448) |
| SLPCS group | -1.241*** | -1.376*** | -0.958*** | -0.994*** |
| | (0.268) | (0.293) | (0.354) | (0.342) |
| Group % of pop. | | | 2.170** | 2.329*** |
| | | | (1.054) | (0.887) |
| Distance from capital | | | -0.138** | -0.103** |
| | | | (0.0613) | (0.0509) |
| Herbst geography | | | -0.159 | -0.194 |
| | | | (0.145) | (0.149) |
| Giant oil field | | | -0.852** | -1.206** |
| | | | (0.373) | (0.484) |
| Democracy | | | 0.0486*** | 0.0550*** |
| | | | (0.0163) | (0.0193) |
| ln(GDP/capita) | | | 0.385*** | 0.441*** |
| | | | (0.132) | (0.152) |
| ln(Population) | | | 0.222* | 0.177 |
| | | | (0.126) | (0.139) |
| Tsetse fly | | -1.882** | | -1.286 |
| | | (0.892) | | (0.979) |
| Neolithic transition | | -0.516*** | | -0.378** |
| | | (0.166) | | (0.175) |
| Ecological diversity | | -1.440** | | -1.326* |
| | | (0.617) | | (0.678) |
| Slave exports | | 0.105* | | 0.182*** |
| | | (0.0536) | | (0.0593) |
| Historical warfare | | 0.601 | | 0.0821 |
| | | (0.421) | | (0.391) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES |

*Notes*: Table 6 summarizes logistic regression estimates with ethnic group-clustered standard errors in parentheses. Section 3 describes the data, and the covariates in different columns correspond with Tables 2 and 3. No specifications contain event history controls because the logit models do not converge, although unreported linear models with years since last change from inclusion to exclusion or vice versa (akin to civil war onset and coup onset) and cubic splines yields qualitatively identical results. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

also rule out a particular confounding concern for Tables 2 and 3. If we are worried that unmodeled factors affected PCS groups' coup behavior by raising their propensity for ethnopolitical inclusion (independent of affecting PCS status), and affected SLPCS groups' civil war behavior by lowering their propensity for inclusion (independent of affecting SLPCS status), then these results show that even if we condition on ethnopolitical access, similar patterns arise.[109]

[109]However, for the purposes of assessing the main hypotheses, the conditional regressions contain an important source of post-treatment bias by conditioning on a factor—ethnopolitical access—that the theory posits as endogenous to pre-colonial statehood.

# 6 Qualitative Evidence

Examining countries individually demonstrates that in 14 of 18 PCS countries, either of two types of events occurred that support the theoretical mechanisms: (1) PCS groups dominated the government at or shortly after independence and coups or civil wars occurred, and (2) members of a PCS group participated at least one civil war or successful coup between independence and the end of the Cold War era. Uganda demonstrates additional support for the posited theoretical mechanisms. Appendix E provides additional references for individual cases.

## 6.1 Modal Violence Paths in PCS Countries

All but one PCS country fits into one of four modal paths based on ethnopolitical inclusion patterns and ethnic violence. The present analysis focuses only on events up to 1989 under the premise, discussed in Appendix Section D.3, that changes following the Cold War opened new political cleavages in Africa.

**Table 7: Summary of Cases**

| Path | Cases |
|---|---|
| 1. PCS dominance and SLPCS civil war | Angola, Burundi, Ethiopia, Mali, Nigeria, Sudan |
| 2. SLPCS dominance and PCS civil war | Chad, Rwanda, Uganda, Zimbabwe |
| 3. Power-sharing and rotating coups | Benin, Ghana, Madagascar |
| 4. Relative peace | Botswana, Guinea, Senegal, Zambia |
| Other | Democratic Republic of Congo |

Among cases in the first path, a PCS group dominated the government at or shortly after independence. Specifically, a PCS group had achieved either "dominant" or "monopoly" status at the center within five years of independence (according to EPR) in Angola, Burundi, Ethiopia, Mali, Nigeria, and Sudan. The PCS group also either dominated or was heavily overrepresented in the officer corps of each country except Nigeria (see Appendix Table B.2). In five of the six countries, at least one excluded SLPCS group initiated a civil war by 1975, and the same occurred in the sixth, Mali, in 1989. Additionally, in every case except Angola, the dominant PCS group staged a successful coup. Sometimes, coups struck against rival ethnic groups, as in Nigeria in 1966. In other cases, such as Sudan, the coups rotated power among members of the PCS group. The theory section discussed how riverine Arabs in Sudan launched numerous coups in reaction to the incumbent's perceived poor handling of ongoing civil wars with non-PCS groups in the south.

For example, in Nigeria, a PCS group controlled power at the center, retained power via a military coup, and

an excluded SLPCS group launched a civil war. Nigeria's federal formula—a legacy of Frederick Lugard's invention of the Native Authority System for the Sokoto Caliphate (pre-colonial state) in the north—dictated that each of the country's three regions would be apportioned seats in the national legislature based on population share. As a result, the constitutionally mandated dicennial census in 1962 carried huge consequences for the distribution of power, especially considering the distinct ethnic parties that represented each region. "The Northern Region's political strength, marshaled by the NPC, had arisen in large measure from the results of the 1952-53 census, which had identified 54 percent of the country's population in that area."[110] Despite conducting the census twice, experts estimated the total count for northerners was wildly inflated and Igbo (SLPCS group) leaders publicly charged the northern (PCS) government with fraud. Igbo officers led a successful coup attempt in 1966. Despite stating that they aimed to create a unitary government without ethnic bias, deep-seated regional cleavages caused northern leaders to perceive the coup "not so much as an effort to impose a unitary government as a plot by the Igbo to dominate Nigeria."[111] This led to a northern-dominated countercoup in 1966, followed by ethnopolitical exclusion of Igbo and an Igbo secession attempt in 1967.

In the second path, an SLPCS group dominated the government at or shortly after independence. In all four cases, an excluded PCS group participated in a civil war either shortly after independence (Chad, Rwanda, Zimbabwe) or after further ethnic narrowing at the center (Uganda). The theory correctly anticipates political violence—specifically, PCS groups often rebel against the government when excluded—although these cases deviate from the trend of PCS groups controlling the government. The next section discusses Uganda in more depth.

The third path features ethnopolitical inclusion and in-fighting at the center. The theory correctly anticipates the coups that occurred in these PCS countries (Benin, Ghana, Madagascar), although without amendment cannot explain why their leaders usually did not resort to ethnopolitical exclusion to prevent future coups.[112]

[110] Lovejoy 1992, 52.

[111] Lovejoy 1992, 56.

[112] Roessler and Ohls 2018 offer a plausible explanation for Benin and Ghana: in each country, the existence of multiple relatively large ethnic groups located close to the capital created incentives to share power—despite high coup risk—because of the devastating expected consequences of ethnopolitical exclusion and civil war. Madagascar also exhibited these conditions, although Cotiers excluded Highlanders from important political positions until 1972.

PCS groups either participated in or were central to the violence that occurred. In Benin, two of the three groups that rotated into and out of power via a series of coups in the 1960s were PCS: Fon, and Yoruba/Nagot and Goun. In Ghana, the leader of the country's first coup in 1966 explicitly denounced president Kwame Nkrumah's attempts to undermine traditional Asante (PCS) organizations—a rivalry that began during the colonial era after Nkrumah attempted to undermine Asante planter-chiefs. In Madagascar, EPR codes the PCS group Highlanders as excluded. However, they retained a strong presence in the military, which EPR does not reflect by primarily using information on executive and cabinets positions to code political status. Highlanders launched a successful coup in 1972.

The Democratic Republic of the Congo is an idiosyncratic case that does not fit neatly into any of these three modal patterns of ethnic violence, although broadly supports the theory because two PCS groups initiated civil wars. The country, in essence, had no central government during its first five years of independence. Correspondingly, EPR codes all politically relevant ethnic groups in DRC as enjoying regional autonomy between 1960 and 1965. Within the first year of independence, PCS groups Luba Kasai and Lunda-Yeke initiated civil wars to secede, the latter led by their king.

Of the 18 PCS countries, only four are theoretical anomalies by exhibiting relative peace. Botswana, Guinea, Senegal, and Zambia provide a fourth modal path by experiencing long periods of stable civilian rule in ethnically inclusionary regimes, although in the 1980s a successful coup occurred in Guinea and a civil war began in Senegal. PCS groups such as the Barotse in Zambia and Peul in Guinea created regional parties during the decolonization era to contest nationalists, but ultimately failed to prevent a dominant nationalist party from taking power at independence.[113]

## 6.2 Evidence from Uganda

Uganda exemplifies PCS groups' privileges and the difficulty of forming broad nationalist parties during the decolonization era in colonies with a PCS group, and consequences for political violence after independence. When Britain colonized Uganda, it bestowed the powerful state of Buganda—which frequently warred with and slave-raided from neighboring groups also incorporated into modern Uganda[114]—with significant self-governance privileges. "The special status of Buganda in Uganda was the most important legacy of the

[113] However, the Barotse king secured a regional autonomy agreement at independence.

[114] Reid 2012, 115-116.

colonial era" and their founding treaty with Britain in 1900 "appeared to the Baganda as in some sense at least an agreement between equals."[115] Therefore, Buganda's later "integration within the rest of Uganda posed serious problems first to colonial officials and subsequently to nationally oriented African politicians [because] Buganda could not be dethroned from its dominant position without seriously compromising the viability of Uganda as a whole."[116] In response to Britain's attempt to unify colonial administration after World War II, Buganda attempted to secede from the rest of Uganda to "safeguard the traditions, Kabakaship, and the customs of Buganda in an independent Uganda."[117] The king—known as the *kabaka*—cited Buganda's distinct status in the Uganda Agreement of 1900 to promote his claim.

Consequently, "the power of traditional groups . . . precluded the success of a centralized, ideological mass party" among all Ugandans.[118] Supporters of the *kabaka* instead created the Kabaka Yekka party—meaning "king only"—after the *kabaka* led a highly successful boycott of the 1961 Legislative Council elections in which less than 2% of eligible Baganda voted. Kabaka Yekka provided "a practical avenue through which Buganda could enter national politics and yet preserve its own autonomy and unity."[119] The ethnically oriented party received 26% of parliamentary seats in the final pre-independence elections in 1962.[120] In response to political deadlock created by the sizable vote share of Buganda's ethnically oriented party, an inter-ethnic ruling coalition formed at independence that composed an "alliance of complete opposites"[121] between Kabaka Yekka and a major party led by a member of an SLPCS group, Milton Obote's UPC party. Consistent with the theoretical expectation that such circumstances facilitate an internal security dilemma, "[i]t is hard to determine at what stage Prime Minister Obote made up his mind to confront the Kabaka and the State of Buganda . . . but it is tempting, from the small amount of evidence available and his careful preparing of the ground, to think that he had intended it all along."[122]

A key event occurred in 1964 that foreshadowed future violence. To provide background, Buganda's initial treaty with Britain awarded territory, subsequently called the "Lost Counties," to Buganda that a

[115] Rothchild and Rogin 1966, 341.
[116] Doornbos 1977, 241.
[117] Rothchild and Rogin 1966, 348.
[118] Rothchild and Rogin 1966, 389.
[119] Rothchild and Rogin 1966, 358.
[120] Schmidt 1999, 934.
[121] Decalo 1990, 152.
[122] Dinwiddy 1981, 514.

British-Baganda alliance had recently captured from rival pre-colonial state Bunyoro (also incorporated into Uganda). In 1964, Obote attempted to undermine Buganda by allowing a referendum to occur over control of the Lost Counties. After the counties' residents voted to join Bunyoro, a political crisis occurred. "As *President*, the Kabaka should have ratified the transfer; as *Kabaka*, such an act was an impossibility" [emphasis in original] because the transfer would erode the king's support from his main constituency.[123] The Lost Counties referendum soon "shifted the balance of power back from Buganda to the central government."[124] Capitalizing on his improved bargaining position, Obote arrested key Baganda ministers before they could appeal for British military assistance. The crisis culminated in 1966 when Obote militarily suppressed a Baganda secession attempt, staged a coup to become the undisputed head of state, and unilaterally terminated the Baganda monarchy.[125] After continued turmoil at the center including Idi Amin's kleptocratic reign in the 1970s, the then-politically powerless Baganda participated in civil wars that removed Amin and, subsequently, Obote after he became president for a second time.

## 7 Conclusion

This article theorized and presented evidence that pre-colonial statehood has contributed to political violence in Africa. The conclusion addresses two additional important questions. First, is Sub-Saharan Africa unique? If so, why? One distinctive regional attribute is that most countries lack a majority ethnic group. Therefore, although PCS groups in Africa tended to have historical advantages, many PCS groups held power tenuously because they lacked numerical preponderance. In some cases, like Uganda, non-PCS groups dislodged PCS groups from power. By contrast, in many East and Southeast Asian countries, an ethnic group with a historical state dominated the government in the 20th century and composed a large majority of the country's population. On the one hand, this may prevent violence by discouraging other groups from attempting to control the government. On the other hand, this may encourage emboldened majority groups to pursue ethnically exclusionary policies that spark civil wars. Future work that assesses how well the present theory exports to other regions will contribute to understanding African uniqueness and to emerging knowledge of how historical factors affect prospects for modern political violence.

[123] Dinwiddy 1981, 514.
[124] Decalo 1990, 155.
[125] Tripp 2009, 45.

Second, without understanding how long-term effects such as pre-colonial statehood affect conflict prospects, common policy recommendations for ending civil wars may be ineffective. For example, promoting inclusive power-sharing agreements likely will not stem violence in PCS countries because the internal security dilemma should destabilize such arrangements. Although the correlation between pre-colonial statehood and civil war onset has weakened since the Cold War ended (see Appendix Table D.15), the changed relationship has arisen mainly because non-PCS countries have experienced more civil wars as new cleavages emerged after the Soviet Union fell, rather than because conflict onset has declined sharply in PCS countries.[126] And even countries such as Uganda that have enjoyed decades of stable governance and economic growth, with Baganda peacefully participating as a junior partner in the governing coalition since 1986, still suffer from civil wars that can be traced in part to earlier failed power-sharing arrangements. Deepening democratic institutions to increase the credibility of power-sharing agreements—e.g., Benin and Ghana, and to a lesser extent in Uganda and Madagascar—and the hope that cross-cutting cleavages over time may mitigate the legacies of distinct statehood, provides a possible but uncertain path out of the coup-civil war trap for PCS countries.

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[126]Using the sample from Table 2, comparing the Cold War period to afterwards, the prevalence of civil war onset has increased by 80% among SL groups compared to a decline of 28% among groups in PCS countries.

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# Online Appendix

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# A Coding Pre-Colonial States

The following elaborates upon the coding rules described in the article, followed by country-by-country coding discussions.

## A.1 Coding Rules

**Definition A.1.** *An ethnic group from the Ethnic Power Relations (EPR) dataset is coded as belonging to a pre-colonial state if co-ethnics governed a substantial percentage of members of the modern ethnic group through a single or small number of political organizations that exhibited some degree of centralized rule on the eve of colonization.*

The following three steps operationalized this definition:

1. ***Generate a list of candidate states.*** First, I consulted a uniform set of sources, 11 continent-wide maps of historical states and every ethnic group in Murdock's (1967) dataset with a jurisdictional hierarchy score of 3 or 4 (large state), to generate a list of candidate states. (I drew the Murdock scores from Michalopoulos and Papaioannou's (2013) replication data.) If none of these candidate states yielded any EPR ethnic groups in the country to be coded as PCS (see next two steps), then I additionally consulted the pre-colonial history section of the country's *Encyclopaedia Britannica* page, which Putterman (2015) uses for his state antiquity index. Consulting numerous different sources on historical states makes it unlikely that the data will fail to incorporate any major states in pre-colonial Africa. Table A.1 summarizes the 11 different maps used in the coding. I found three of the maps because they are used by Depetris-Chauvin (2015): Ajayi and Crowder (1985), Barraclough and Parker (1993), and McEvedy (1996). Although useful for identifying candidate states, none of these sources explicitly say what they mean by states, and often list notable peoples alongside states. This emphasizes the importance of gathering additional information about the candidate states.

**Table A.1: Maps of Historical States**

| Source | Notes |
|---|---|
| Ajayi and Crowder (1985; Section 55) | Includes all states from the map "European Colonies and African States on the Eve of the 1884-1885 Berlin Conference." |
| Atmore (1985; 12, 63) | Includes all states from his maps "Northern Africa on the eve of partition" and "Southern Africa on the eve of partition." |
| Barraclough and Parker (1993; 235) | Includes all states and other selectively labeled empires from the map "Africa before the partition by European powers 1800 to 1880." |
| Gailey (1971) | Includes all indigenous states in the map "European Territory - 1884." |
| Griffiths (1995, 39) | Includes all states from his map "19th Century AD." |
| Johnston (1884; xvi-1) | Includes all states in the map. |
| Kasule (1998; 83, 85) | Includes all states from his map in either 1880 or 1885. |
| McEvedy (1996; 107, 111, 113, 115) | Includes all states identified in at least one of his maps from 1878, 1885, 1890, or 1900. |
| Oliver and Atmore (2005; 124-5) | Includes all states from the map "Africa on the eve of partition: African states and European settlements." |
| Pakenham (1991; 19, 280) | Includes all states from the maps "Africa before the scramble: indigenous and alien powers in 1876" and "Africa in 1886: the scramble half complete." |
| Reid (2012; xix) | Includes all states with demarcated territories in the map "Nineteenth-century military revolution." |

2. ***Match candidate states with EPR ethnic groups and countries.*** Second, I used additional secondary sources to match candidate states with EPR ethnic groups to generate a list of candidate PCS groups. In many cases, descriptions of the candidate state listed an ethnic group that corresponded to an EPR ethnic group. I also compared the location of the candidate state (in particular its capital) with EPR ethnic group polygons from Vogt et al. (2015). Candidate states without a corresponding politically relevant EPR ethnic group were not scrutinized further. For example, the Benin empire in Nigeria governed members of the Edo ethnic group, but this is a not a politically relevant ethnic group in the EPR dataset (or a subset of one).

   The capital of the candidate state must be located within the same modern country borders as the EPR ethnic group. This consideration ensures groups are not coded as PCS simply because a pre-colonial state governed ethnic kin located far away. For example, see the example of Fulani and Hausa states in the Niger coding notes, and the broader discussion of partitioned ethnic groups in Murdock's (1959, 1967) dataset alongside Table A.5.

3. ***Code pre-colonial state (PCS) groups.*** Third, given a list of candidate PCS groups, I assessed whether the group met the criteria in Definition A.1. These four criteria are individually necessary and jointly sufficient to code a group as PCS.

   (a) *Co-ethnic governance.* The candidate state was independent rather than a tributary state to another empire, such as the Adamawa emirate that was subordinate to the Sokoto Caliphate.

   (b) *Some degree of centralization.* There is evidence that the state actually exhibited some degree of centralized rule (i.e., government above the local level). In addition to relying on historians' statements about the state's level of centralization, when possible I compiled information about central administrative institutions. Dahomey (in modern-day Benin) was a paradigmatic state: "The state was a form of absolute monarchy unique in Africa. The king, surrounded by a magnificent retinue, was the unchallenged pinnacle of a rigidly stratified society of royalty, commoners, and slaves. He governed through a centralized bureaucracy staffed by commoners who could not threaten his authority" (*Encyclopaedia Britannica* Dahomey).

   Overall, the required level of centralization to satisfy this criterion is fairly low, with the justification that even modest forms of pre-colonial ethnic-wide hierarchical political organization would likely trigger the theoretical mechanisms. Additionally, higher standards for centralization would lead only a handful of groups to be coded as PCS. For example, after stating that "by the standard of political units in precolonial sub-Saharan Africa, Sokoto would rank among the most centralized, stable, and sizable," Kohli (2004, 297) continues: "The political structure of the Sokoto Caliphate was nevertheless rudimentary, especially when compared with other non-Western agrarian monarchies of the period . . . Sokoto attained high levels of neither political stability nor stateness: There was no centralized army; centralized administration was weak, if nonexistent; the quality of rule varied across emirates, as well as over time," among other considerations.

   Although the bar for "some degree of centralization" is low, two types of groups failed this criterion: nomadic and/or pastoralist groups (for example, the Maasai in Kenya), and groups that governed trading centers but without evidence that a central organization existed or exhibited any degree of control, for example, the Bateke in Republic of Congo.

   (c) *One or a small number of political organizations governed a substantial percentage of members of the EPR ethnic group.* This rules out groups fractured into a large number of distinct states, ranging from dozens (e.g., Yoruba in Nigeria) to hundreds (e.g., Bamileke in Nigeria) of separate

states. The easiest cases are ones in which there was only a single state, like the Buganda kingdom for the Baganda in Uganda. However, for the primary PCS measure, a group split into several states could be coded as PCS if there were either a small number of states or if one state was clearly ascendant. For example, Angola's Mbundu-Mestico had two historical states and are coded as PCS. Tswana in Botswana are also coded as PCS despite being split into eight chiefdoms because Ngwato governed nearly half the Tswana population and the Tswana demonstrated their ability to collectively organize. Table A.2 denotes these cases. Appendix Table D.4 re-runs the results when the only groups coded as PCS meet all the criteria and were governed by a single pre-colonial state.

Furthermore, in some cases secondary sources highlighted only a single state, but either (1) the secondary sources also indicated considerable diversity in political organization among that ethnic group (e.g., Myene in Gabon) or (2) the EPR politically relevant ethnic group composes more than one ethnic group and the state ruled only one of these groups (e.g., Ndebele-Kalanga-(Tonga) in Zimbabwe). In such cases, I assessed whether or not the state governed a substantial percentage of the EPR ethnic group, measured by comparing a map of the state to the EPR ethnic group polygon or by examining population estimates. Although there is no bright line for "substantial," in the only four cases for which a state exhibited evidence of centralized institutions but was deemed too small relative to the size of the whole EPR ethnic group to code the group as PCS, rough population estimates suggest less than 20% (Sanwi in Cote d'Ivoire, Myene in Gabon, Northerners in Malawi, Ovambo in Namibia).

(d) *On the eve of colonization.* Finally, the ethnic group exhibited these characteristics at the onset of European colonization—even if its state had declined from its zenith—under the justification that groups' influence on colonial policies is a key mechanism in the present theory. For example, whereas Malawi's Chewa were organized under the Maravi Confederacy that may have once met the criteria for centralization, it fell in 1720. By the time British colonial rule began in the late 19th century, Chewa were not centralized under either one or several states. In most cases, this criterion implies the state had to exist in the 1880s—when Europe began conquering most of the interior territory of Africa—to count. This is also the time period that most of the maps cover. However, some ethnic groups experienced early major colonial interference and are coded as PCS despite colonial onset prior to 1870. Table A.2 denotes these cases. Appendix Table D.5 re-runs the results when the only groups coded as PCS meet all the criteria and did not experience early major colonial interference. To code early major colonial interference systematically, I assessed every PCS group in each country that Ertan et al. (2016) code as becoming colonized by Western Europe prior to 1870 (plus Sudan, which Egypt colonized for a period in the 19th century), and the coding notes detail which of these states experienced early major colonial interference and which not.

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**Table A.2: List of PCS Groups**

| Country | EPR ethnic group | Historical state(s) |
|---|---|---|
| Angola | Mbundu-Mestico*,† | Kasanje/Matamba |
| Benin | South/Central (Fon) | Dahomey |
| Benin | Southeastern (Yoruba/Nagot and Goun) | Porto Novo |
| Botswana | Tswana* | Tswana chiefdoms |
| Burundi | Tutsi | Burundi |
| Chad | Muslim Sahel groups | Ouaddai |
| DRC | Luba Kasai | Luba |
| DRC | Luba Shaba | Luba |
| DRC | Lunda-Yeke | Lunda |
| Ethiopia | Amhara | Ethiopia |
| Ghana | Asante (Akan) | Asante |
| Guinea | Malinke | Samori |
| Guinea | Peul | Futa Jalon |
| Madagascar | Highlanders | Merina |
| Mali | Blacks (Mande, Peul, Voltaic etc.) | Tukulor |
| Nigeria | Hausa-Fulani and Muslim Middle Belt | Sokoto |
| Rwanda | Tutsi | Rwanda |
| Senegal | Pulaar (Peul, Toucouleur)*,† | Bondu/Futa Toro |
| Senegal | Serer*,† | Sin/Salum |
| Senegal | Wolof*,† | Walo/Kajor/Bawol/Jolof |
| South Africa | Zulu† | Zulu |
| Sudan | Fur | Darfur |
| Sudan | Shaygiyya, Ja'aliyyin and Danagla† | Mahdist |
| Uganda | South-Westerners (Ankole, Banyoro, Toro)* | Ankole/Bunyoro/Toro |
| Uganda | Baganda | Buganda |
| Zambia | Bemba speakers* | Kazembe/Bemba |
| Zambia | Lozi (Barotse) | Lozi |
| Zimbabwe | Ndebele-Kalanga-(Tonga) | Ndebele |

*All groups ruled by more than one pre-colonial state are coded as non-PCS for the first alternative PCS coding. †All groups whose states experienced early major colonial interference are coded as non-PCS for the second alternative PCS coding. This includes the Mahdist state in Sudan, which followed a period of Egyptian rule in the 19th century (1821–1882).

## A.2 Country-by-Country Coding Discussions

Country-by-country coding discussions follow. EPR ethnic groups coded as PCS for the primary PCS measure are stated in bold red. As in Table A.2, all groups ruled by more than one pre-colonial state are coded as non-PCS for the first alternative PCS coding, denoted by $^*$. All groups whose states experienced early major colonial interference are coded as non-PCS for the second alternative PCS coding, denoted by †. When citing *Encyclopaedia Britannica* online (academic edition), I list the specific article from which I drew the information as "EB [title of article]."

### A.2.1 Angola

Candidate states from maps: Kasanje, Ovimbundu, Kongo.

- *Kasanje. EPR group: Mbundu-Mestico.* The **Mbundu-Mestico**$^{*,\dagger}$ belonged to two major states, Kasanje and Matamba (Warner 1991a, 12-13). Imbangala invasions created the Kasanje state, which was populated by Mbundu. "By the time Ndongo was extinguished as an independent state, Kasanje had grown to be one of the most powerful states in West Central Africa" (Birmingham 1966, 126). Furthermore, "Lower-ranking Imbangala officials had no independent authority which might detract from the power concentrated in the position of the single titled king," reflecting the "near-total centralization in the Imbangala *kilombo*" (Miller 1976, 236, 268). The "Imbangala kingdom of Kasanje ... flourished in northwestern Angola between ca. 1620 and 1912" (Miller 1979, 51), although "the nineteenth century saw the breakdown of this stability, with the onset of a gradual drift toward decentralization" (Miller 1979, 54). Consistent with Ertan et al.'s (2016) coding of an early colonial onset date in Angola (1750), this case is coded as early major colonial interference due to Portugal's role in weakening the Kasanje kingdom in the 19th century. "Factions in Kasanje attracted the attention of the European sources soon after 1800, and Portuguese interference in Kasanje politics followed as the Europeans sought advantage from the growing disunity. Politics at the central court had reached an impasse by the 1840s, a period of Portuguese occupation followed in the 1850s, and by the 1860s control of the middle Kwango valley had returned to the regional factions" (Miller 1979, 54).

  The sister of a monarch from the older Mbundu state of Ndongo founded the Matamba state. The kingdom lasted throughout the 19th century, although its once-peaceful relations with Portugal became increasingly hostile as they encroached on Matamba territory, and was destroyed by a Portuguese expedition in 1909 (EB Matamba).

- *Ovimbundu. EPR group: Ovimbundu-Ovambo.* There were 22 distinct Ovimbundu states that "were not politically unified" (Heywood 2000, 1-2). They even faced difficulties projecting power within their own domain: "The legacy of the Imbangala mentality of pillage, the history of incessant warfare between the states, the [low] population density, the persistence of local identities, and the almost total absence of state bureaucracies also limited the power that Ovimbundu rulers exercised" (4).

- *Kongo. EPR group: Bakongo.* The Kongo Kingdom disintegrated in the 17th century, leaving the Bakongo politically fractured on the eve of colonization. "Their former political unity long broken, the various segments of the ethnolinguistic category [of Bakongo] in Angola experienced quite different influences in the colonial period" (Warner 1991b, 72).

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### A.2.2 Benin

Candidate states from maps: Dahomey, Porto Novo, Borgu. Candidate ethnic groups from Murdock: Fon.

- *Dahomey. EPR group: South/Central Fon.* The Dahomey state of the **South/Central (Fon)** "was a form of absolute monarchy unique in Africa. The king, surrounded by a magnificent retinue, was the unchallenged pinnacle of a rigidly stratified society of royalty, commoners, and slaves. He governed through a centralized bureaucracy staffed by commoners who could not threaten his authority . . . Dahomey was organized for war, not only to expand its boundaries but also to take captives as slaves . . . From approximately 1680, a regular census of population was taken as a basis for military conscription" (EB Dahomey).

- *Porto Novo. EPR group: Southeastern (Yoruba/Nagot and Goun).* Although information about Porto Novo is more scarce, it appears to meet the criteria to code **Southeastern (Yoruba/Nagot and Goun)** as PCS. The Yoruba kingdom Porto Novo was a distinct kingdom from Dahomey whose capital was the eponymous city on Benin's coast, situating it at the center of the slave trade. Dahomey experienced continual warfare throughout the 19th century with Porto Novo (Decalo 1990, 91), whose native dynasty remained independent during the 19th century (Hargreaves 1963, 54; see also EB Benin). Its king list stretches from 1688 to 1913, when France ended the kingdom (Decalo 1995, 295). Yoruba-Nagot are more populous than Goun (Scarritt and Mozaffar 1999), implying that the Yoruba/Nagot's kingdom covered more than half of the amalgamated EPR group "Yoruba/Nagot and Goun." Furthermore, many Goun also lived in Porto Novo and were "strongly affected by Yoruba cultural influences" (Decalo 1995, 189).

- *Borgu. EPR group: Northern (Bariba, Peul, Ottamari, Yoa-Lokpa, Dendi, Gourmanchma).* Among groups in northern Benin, "No centralized protostates had emerged among the Bariba, Pila Pila, and other groups, though small powerful states existed in Nikki, Kouande, Djougou, Parakou, and Kandi" (Decalo 1990, 92). Parakou was the administrative center, and Nikki was the most important city on the Dahomey side of the border of the former Borgu state of the Bariba people that was partitioned between British Nigeria and French Dahomey. Borgu, however, did not even rule over all the Bariba and was tributary: "During the pre-colonial era the population was organized into several quasi-feudal semi-autonomous states hierarchically linked and owing traditional allegiance to that of Bussa in Nigeria" (Decalo 1995, 95).

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### A.2.3 Botswana

Candidate states from maps: Tswana.

- *Tswana. EPR group: Tswana.* Coding the **Tswana*** as PCS is a borderline coding decision because Tswana were fractured. There were eight main separate Tswana tribes, with the following population breakdowns calculated using population data from each of their native reserve territory in 1936: Ngwato (47%), Tawana (19%), Kwena (12%), Ngwaketse (11%), Kgatla (6%), Malete (3%), Rolong (1%), and Tlokwa (1%) (Schapera 1955, 2). Each tribe "manages its own affairs under the direction of a chief (*kgosi, morena*), who is independent of the rest" (Schapera 1940, 56). However, the chiefdoms achieved centralized political institutions. Lange (2009, 142) describes their political organization as "centralized chiefdoms" in which "the chieftaincy was a powerful position, having executive, judicial, and legislative power as well as a high level of discretion over chiefdom lands and cattle." Furthermore, the Tswana as a whole demonstrated some cohesion by collectively fighting against South African Boers and, under the leadership of the predominant chief, Khama III of the Ngwato, requested British protection in the 1870s (144).

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### A.2.4 Burundi

Candidate states from maps: Rundi. Candidate ethnic groups from Murdock: Rundi.

- *Rundi. EPR group: Tutsi.* The Rundi **Tutsi** state lasted from the late 16th century until the end of colonial rule. The state incorporated all the regions that eventually composed modern Burundi during the reign of Ntare Rugamba between 1796 and 1850 (Newbury 2001, 265-6). Although political conflict among Ntare Rugama's sons decreased the extent of centralized rule relative to the neighboring Rwandan state, politics were centered around the state. "This was political struggle, not anarchy: Baganwa often fought over recognized positions, including that of kingship itself—the control of royal rituals

...kingship in Burundi was in many cases not strong enough to suppress political conflict; nonetheless, it was often central to political struggle in Burundi and influential in the forms those struggles assumed" (285).

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### A.2.5 Cameroon

Candidate states from maps: none. Candidate states from EB: Kotoko, Bamum. Candidate ethnic groups from Murdock: Mum (i.e., Bamum).

- *Kotoko. EPR group: Fulani (and other northern Muslim peoples).* Kotoko was not an independent state, and was instead incorporated into Borno, whose capital was in Nigeria (DeLancey and DeLancey 2000, 118). The secondary sources consulted also mention that Kotoko was part of a broader grouping of political entities in northern Cameroon. Germany (Cameroon), Britain (Nigeria), and France (Chad) partitioned the former states of Adamawa, Borno, and Mandara, all of which occupied territory in northern Cameroon (Barkindo 1985, 29). The imperial capitals of the Adamawa emirate of the Sokoto empire (EB Adamawa) and Borno were located in Nigeria. Mandara, located in the polygon of the EPR group "Northwestern Anglophones (Grassfielders)" in Cameroon, had become a weak tributary state by the onset of colonization. After reaching its zenith in the late 18th century, "The beginning of the nineteenth century, however, saw Mandara at the nadir of its fortunes when the *Jihad* of Modibbo Adama and the creation of the Emirate of Fombina (Adamawa) detached much of its territory and forced the Sultan to seek the aid of Borno" (Barkindo 1985, 31). The kingdom was located in the Mandara mountains, and EB's entry for "Mandara Mountains" mentions peoples "living in dispersed homesteads or villages of small, circular huts" and nothing about a history of political centralization.
- *Bamum. EPR group: Bamileke.* Farther south, "The Fulani expansion [NB: the Fulani are widespread across western Africa and controlled states such as Sokoto and Adamawa] reached its southernmost point with the conquest of Bamum, a state founded in the 17th century by Nshare, the son of a Tikar chief. Bamoum was one of the largest of numerous states that emerged in the grassland areas of Cameroon at that time" (EB Cameroon). The historical capital of the Bamum, Foumban, is located in EPR's Bamileke polygon. However, the Bamileke were politically fractured: "Bamileke is a collective term referring to a loose aggregation of some 100 states or chiefdoms of the eastern Grassfields in the western province of Cameroon ... [a] history of shifting borders, alliances, and the influx of refugees from neighboring states makes each Bamileke state a political composite of diverse peoples owing allegiance to the king and the established royal institutions. During the precolonial era, the Bamileke fought wars among their constituent states as well as with the neighboring Nso and Bamoun" (La Famille Bamileke 2016; see also Firmin-Sellers 2001).

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### A.2.6 Central African Republic

Candidate states from maps: Bobangi.

- *Bobangi. EPR group: Riverine groups (Mbaka, Yakoma, Banziri etc.).* The Bobangi were among the riverine peoples that escaped enslavement, and settled on and monopolized trade along the Oubangui river for two centuries prior to French colonization (Decalo 1998, 191; Kalck 2004, 26), but the sources do not suggest this trading center developed centralized institutions across Central African Republic's various riverine groups (more on this below).

Candidate states from EB: Dar al-Kuti, Zande, Bandi.

- *Preface for the remaining candidate states.* In Central African Republic: "Many of the ethnic groups in the region were organized in the precolonial era into small sultanates, but all were of minor geographical scope and little political and military weight" (Decalo 1998, 191). In the broader region of central Africa: "In the forests of Gabon and Middle Congo and the savannas of Oubangui-Chari and southern Chad, were small tribal groups whose traditional social organization had in many cases been upset by migrations and invasions coincident with the spread of the coastal slave trade and Muslim slave-raiding in the north" (Ballard 1965, 233-4).
  - *Dar al-Kuti. EPR group: Northern groups (Baya, Banda, Mandjia, Sara, Goula).* Tributary to the Wadai kingdom in Chad (Kalck 1992, 48; Bradshaw and Fandos Rius 2007).
  - *Zande and Bandi. EPR group: Riverine groups (Mbaka, Yakoma, Banziri etc.).* Two Bandi (also spelled Bandia) sultanates existed on the rivers that compose Central African Republic's southern border: Bangassou and Rafai (Kalck 1992, 16), which correspond with their eponymous modern towns. The Zande (also called Azande) people divided between Central African Republic, Democratic Republic of Congo, and Sudan also carved out small but fractured states: "During their conquests, scions of the royal clan carved out kingdoms for themselves, and wars between these various kingdoms were frequent" (EB Zande). The evidence for Bobangi, Zande, and Bandi is consistent with Decalo's (1998, 191) argument that riverine peoples in Central African Republic were fractured among many small sultanates.

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### A.2.7 Chad

Candidate states from maps: Ouaddai, Bagirmi, Bornu. Candidate ethnic groups from Murdock: Bagirmi.

- *Historical background on these states.* These are the three traditional states in Chad according to the literature: Ouaddai (also spelled "Wadai"), Bagirmi, and Bornu (also referred to as Kanem-Bornu; Bornu broke off the former Kanem empire before subsequently conquering Kanem). These states created a wide gulf between themselves and neighboring stateless societies. "The nearly stateless societies of the South, smaller and less well armed, could not simply be absorbed by the great states of the Sahel that emerged at various points in the thousand years preceding colonization. One principal reason was that they served as hunting grounds for slaves, a role they could not fulfill if, by incorporation into the Sahelian states of Ouaddai, Baruirmi, and Kanem, they became a part of Dar-el-Islam" (Nolutshungu 1996, 27-8). Similarly, Decalo (1980, 28-9) argues "the recorded history of the country is very much the story of the tug-of-war between the Muslim slave-states of the Sahel (Baguirmi, Ouadai, and Kanem-Bornu) and their deep razzias in the animist and disorganised Sara south."
- *Ouaddai. EPR group: Muslim Sahelian groups.* Ouaddai "developed an elaborate hierarchical structure with a powerful absolute monarchy" (Decalo 1997, 326). The **Muslim Sahelian group** Maba founded the Ouaddai state (Decalo 1997, xxv, 276), which included most of the territory spanned by the EPR Muslim Sahelian groups' group-location polygon. After 1982 in the EPR dataset, Muslim Sahelian groups split into Hadjerai and Zaghawa/Bideyat, and both are coded as PCS groups.
- *Bornu. EPR group: none.* The capital of Bornu is in Nigeria.
- *Bagirmi. EPR group: none.* Bagirmi was not independent in the 19th century, and instead was "under nearly continuous military pressure from—and [was] frequently tributary to—both the Kanem-Bornu Empire and the Ouadai state" (Decalo 1997, 78).

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### A.2.8 Congo, Democratic Republic

Candidate states from maps: Luba, Lunda, Kuba, and Azande. Candidate ethnic groups from Murdock: Luba, Suku.

- *Luba. EPR groups: Luba Kasai and Luba Shaba.* The Luba were organized into a large state in which "the king retained a great deal of power over appointments and tribute" over the empire's provinces (Bobb 1999, 261). EB "Luba-Lunda states" refers to the Luba state as centralized and describes its expansion. This state corresponds with **Luba Kasai** and **Luba Shaba**, which renowned historian Jan Vansina also identifies as two of the major Luba clusters (Bobb 1999, 261).

- *Lunda. EPR group: Lunda-Yeke.* The Lunda organized a large state that "consisted of a centralized core, a ring of provinces closely tied to the capital, an outer ring of provinces that paid tribute but were otherwise autonomous, and a fringe of independent states that shared a common Lunda culture" (EB Lunda Empire). EB "Luba-Lunda states" refers to the Lunda state as centralized and describes its expansion. This state corresponds with **Lunda-Yeke**.
- *Kuba. EPR group: none.* Kuba does not correspond with any EPR ethnic groups. Comparing a map of the Kuba state (Vansina 1978, 8) with GeoEPR polygons, eastern parts of Kuba overlap with western parts of the GeoEPR polygon for Lulua. However, the Lulua were not ruled as part of Kuba: "In the 19th century, rebellions in the east and Lulua invasions in the south weakened Kuba to the point of civil war" (EB Kuba).
- *Azande. EPR group: Azande.* EPR codes Azande as politically irrelevant.
- *Suku. EPR group: none.* Although the Suku developed centralized institutions (Kopytoff 1961), EPR does not code them as a politically relevant ethnic group. They reside in the EPR polygon for Bakongo, but are a distinct ethnic group from the Bakongo (see, for example, EB Suku).

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### A.2.9 Congo, Republic

Candidate states from maps: Teke.

- *Teke. EPR group: Bateke.* The kingdom of Teke (also called the Tio kingdom or the kingdom of Anziku) was a trading center. "The political structure was unique. A state without a central army or a unified set of courts, central councils, central administration, delegation of authority from top down, where at least two ideologies competed (kingship based on *nkira* and lordship on *nkobi*), where rule at each level was most reminiscent of leadership in a kinship unit. The state did not even present a unified policy towards the outside, e.g. towards the Europeans" (Vansina 1973, 431-2). The "sub-chiefdoms nominally ruled in the name of the Makoko who retained the prerogative of appointing them [but] were virtually autonomous" (Decalo et al. 1996, 48). Instead, the capital Mbe served as the trading center of the Pool region, which was an "economic and trade hub" (48).

Candidate states from EB: Loango, Kongo.

- *Loango. EPR group: Vili.* This was an ancient kingdom of the Vili people. However, "By the 18th century, power had become fragmented. A long interregnum began in 1786, and when a king was finally enthroned he lacked any real authority" (EB "Kingdom of Loango"). Martin (1972, 158-174) provides additional details on the "dismemberment of the old Vili kingdom" (174) and offers concurring summarizing statements such as: "The fragmented scene of 1870 was a far cry from the powerful, unified kingdom described by European traders in the late sixteenth and early seventeenth centuries" (158).

- *Kongo. EPR group: Bakongo.* The capital of the Kongo kingdom was in Angola (also see Angola's Kongo entry).
- *Final note.* Coding no PCS groups in Congo is consistent with the general contention that "in the forests of Gabon and Middle Congo and the savannas of Oubangui-Chari and southern Chad, were small tribal groups whose traditional social organization had in many cases been upset by migrations and invasions coincident with the spread of the coastal slave trade and Muslim slave-raiding in the north" (Ballard 1965, 233-4).

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### A.2.10 Cote d'Ivoire

Candidate states from maps: Kong.

- *Kong. EPR group: Northerners (Mande and Voltaic/Gur).* Kong was a trading center that briefly expanded in the mid-18th century (Saul 1998, 549-50) but "was unstable and failed to endure as a centralized state" (Perinbam 1988, 453). Its capital, Kong, corresponds with the EPR polygon for "Northerners (Mande and Voltaic/Gur)." Until defeat by Samori at the end of the 19th century, Kong served as the core of a decentralized trading empire that featured alliances by independent states and houses (Perinbam 1988, 455; Saul 1998, 564). Mundt (1995) refers to Kong specifically as a "trading center" (119) and Oliver and Atmore (2005, 70) label Kong as tributary to Asante.

Candidate states from EB Cote d'Ivoire: several small eastern states.

- *Small eastern states. EPR group: Northerners (Mande and Voltaic/Gur).* EB Cote d'Ivoire mentions small eastern states of Gyaman, Ndenye, Sanwi, and Baule that were related to the Asante empire in contemporary Ghana either because they were formed by migrants from Asante or because the states were tributaries to Asante (Mundt 1995 explicitly states that the two main ones, Gyaman and Sanwi, were tributaries). EB also mentions Bouna, which was founded by Dagomba migrants from contemporary Ghana (Mundt 1995, 44-5). None of the states were large and therefore did not govern a sizable portion of Cote d'Ivoire's northern ethnic groups. For example, Boone (2003, 232) estimates Sanwi's population at 40,000 in 1956. Combining Maddison's (2010) population estimate for Cote d'Ivoire in 1956 with EPR's figure for "Northerners (Mande and Voltaic/Gur)" as a percentage of the country's total population yields an estimate that Sanwi composed less than 4% of this ethnic group's population, consistent with the claim of this group being fractured among numerous small kingdoms and other types of polities. Boone (2003, 181-2) cites different historical sources claiming "the absence of an Ashanti-type [as in Ghana] federal monarchy with a supreme chief anywhere in the Ivory Coast" and "at the time of colonial contact, 'there were no large-scale political entities in

the Ivory Coast . . . comparable with the Ashanti in Ghana, Mossi in Upper Volta, or with the resurgent Muslim states of Mali and Senegal."'

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### A.2.11 Djibouti

Candidate states from maps: none. Candidate ethnic groups from Murdock: Esa (Issa).

EB does not have a section on pre-colonial Djibouti (which perhaps reflects the lack of pre-colonial statehood). Examining Alwan and Mibrathu's (2000) entries for Djibouti's two EPR ethnic groups, Afar and Somali (specifically, the Issa clan), do not indicate any pre-colonial states.

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### A.2.12 Eritrea

Candidate states from maps: none. Candidate states from EB: none.

### A.2.13 Ethiopia

Candidate states from maps: Ethiopia and Oromo. Candidate ethnic groups from Murdock: Amhara, Sidamo peoples (Gibe, Janjero, Kafa).

- *Ethiopia. EPR group: Amhara.* After Ethiopia declined in power and territorial scope in the 17th and 18th centuries, "the second half of the nineteenth century, by contrast, saw a still sharper swing in the opposite direction. The fragmented polity was pulled together, its territory was more than doubled, and its independence was assured in the face of European invasion" (Clapham 1977, 37-8). The monarch personally commanded the state's army, and the government extracted regular taxes from its regions (44). The **Amhara** controlled the monarchy.

- *Oromo. EPR group: Oroma.* Reid's (2012) map includes the Oromo. However, the Oromo belonged to "political organisations without kings" and whose " 'non-state' system [was] characterized by pastoral militarism" (Reid 2012, 68; see also EB Oromo).
- *Sidamo peoples (Gibe, Janjero, Kafa). EPR group: Other Southern Nations.* Kafa belong to the Murdock cluster "Sidamo peoples" that compose a subset of the EPR group "Other Southern Nations" in Ethiopia. EB "Sidamo" mentions the Kefa kingdom, which exhibited evidence of centralization (Baye 2012), but they compose too small a percentage of the EPR ethnic group (5%) to code Other Southern Nations as PCS. I calculated this figure using the CIA World Factbook's (n.d.) estimate that Kafa compose 1.1% of Ethiopia's total population, and EPR's estimate that Other Southern Nations composes 20.24% of Ethiopia's total population. Neither Gibe nor Janjero exhibit evidence of centralization.

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### A.2.14 Gabon

Candidate states from maps: none. Candidate states from EB Gabon: Orungu.

- *Orungu. EPR group: Myene.* Orungu is one of the six Myene clans that are "linked by language though historically fractured into tiny entities" (Decalo 1998, 117). Although its kings "grew rich and powerful from taxing and regulating the slave trade" in the first half of the 19th century, they numbered only 5,000 (Gardinier and Yates 2006, 251; Decalo 1998, 118) and did not compose a large enough percentage of the Myene to code the EPR ethnic group Myene as a whole as PCS. Dividing 5,000 by Rich's (2010, 208) estimate that "perhaps 30,000 or so belonged to Omyènè-speaking clans, although the lack of firm statistics makes this only a rough estimate" yields 17%. Furthermore, the Orungu's centralized structures distinguished them from other Myene groups (Gardinier 1983, 501; Bucher 1975, 544). This coding supports the general contention that, "in the forests of Gabon and Middle Congo and the savannas of Oubangui-Chari and southern Chad, were small tribal groups whose traditional social organization had in many cases been upset by migrations and invasions coincident with the spread of the coastal slave trade and Muslim slave-raiding in the north" (Ballard 1965, 233-4).

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### A.2.15 Gambia

Candidate states from maps: none. Candidate states from EB: Malinke.

- *Malinke. EPR group: Mandinka.* Malinke states in Gambia were tiny and highly fractured. Hughes and Gailey (1990, 102) refer to "states," but then proceed to list 15 separate Malinke states along the Gambia river.

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### A.2.16 Ghana

Candidate states from maps: Asante and Fante. Candidate ethnic groups from Murdock: Dagomba.

- *Asante. EPR group: Asante (Akan).* In the Asante empire of the **Asante (Akan)**, central political power was organized around a monarch that presided over a standing army and bureaucracy (EB Asante Empire; Apter 1972, 23) and was "one of the most highly organized military and political systems on the west coast of Africa" (Apter 1972, 25).
- *Fante. EPR group: Other Akans.* Although the coastal Akan group Fante created states, their various chiefdoms/states were autonomous from each other—and at times subordinate to Asante—and only occasionally banded together, when threatened (Owusu-Ansah 2005, 119-20). "Among the Fanti and other coastal states we find an almost endless process of fragmentation of authority. For instance, the people now know as the Fantis are in fact a surprisingly large number of sovereign and independent states" (Agbodeka 1964, 85).
- *Dagomba. EPR group: Northern Groups (Mole-Dagbani, Gurma, Grusi).* Tributary state to Asante in the 19th century (EB Dagomba).

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### A.2.17 Guinea

Candidate states from maps: Futa Jalon and Samori's empire.

- *Futa Jalon. EPR group: Peul.* Futa Jalon emerged as part of the wider West African Fula jihads in the early 18th century and survived until it was incorporated by France in 1896 (Oliver and Atmore 2005, 64; EB Fouta Djallon). This "centralized state" of the **Peul** "maintained a dominant position in the area through independence in 1958" (O'Toole 2005, 96) and collected tribute from the villages and administered a legal system (Cowan 1962, 150).
- *Samori's empire. EPR group: Malinke.* The **Malinke** warlord Samori Toure conquered territory and created an independent state in modern-day Guinea in the late 19th century (O'Toole 2005, 161). He was "an able administrator. He divided his empire into provinces and cantons; each was ruled by one of his faithful appointed representatives" (Cowan 1962, 151). Boone (2003, 247-8) refers to Samori as "an ambitious centralizer and state builder."

Although Ertan et al. (2016) list an early colonization date for Guinea (1849), both states persisted beyond the 1870 threshold used to code early major colonial interference. Regarding Peul and Futa Jalon: "In spite of the growing realization of the commercial and geographical importance of Futa Jallon, this region, like many other areas of West Africa, was not subject to systematic European penetration until the last two decades of the century . . . [The Fula state's] collapse in 1896 was due principally to the disintegration of the Fula state" (McGowan 1981, 246). Regarding Malinke and Samori Toure: "[T]he establishment of French hegemony was to be delayed by the bitter resistance of the last of the great nineteenth-century Soudanese conquerors, the Almamy Samory Toure . . . He rapidly acquired a reputation as a warrior and by 1872 had made himself king of his native town. He extended his control along the left bank of the Niger until he came in contact with the French military expeditions" (Cowan 1962, 150). France did not capture Toure until 1898.

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### A.2.18 Guinea-Bissau

Candidate states from maps: none. Candidate states from EB: Kaabu.

- *Kaabu. EPR group: none.* The Kaabu state was centered in Guinea-Bissau and extended into Senegal. It was a Mandinka state that originally broke away from the Mali Empire and lasted in some form until being destroyed by Futa Jalon in 1867 (Lobban and Mendy 1997, 219). However, EPR does not code Mandinka as a politically relevant ethnic group in Guinea-Bissau. Lobban and Mendy's (1997) map of Kaabu shows the state was located in the northeast part of the modern country, where EPR does not map any politically relevant ethnic groups.

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### A.2.19 Kenya

Candidate states from maps: Maasai. Candidate ethnic groups from Murdock: Gyriama.

- *Massai. EPR group: Kalenjin-Masai-Turkana-Samburu.* The Maasai were a nomadic warrior group (EB Maasai).
- *Gyriama. EPR group: Mijikenda.* Clans and age grades traditionally organized members of this ethnic group without evidence of political centralization (EB Nyika).

Candidate states from EB Kenya: none.

*Final note.* Decalo's (1998, 177, 179) description coincides with absence of ethnic groups coded as PCS: "A distinctive feature of Kenya's peoples is the absence of strong chiefs, internal unity or historic states . . . Unlike neighboring Uganda, Kenya did not emerge at independence with kings and chiefs and primordial mass allegiances" (Decalo 1998, 177, 179).

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### A.2.20 Liberia

Candidate states from maps: none. Candidate states from EB Liberia: none.

### A.2.21 Madagascar

Candidate states from maps: Merina. Candidate ethnic groups from Murdock: Merina, Sakalava

- *Merina. EPR group: Highlanders.* The Merina created a state whose army was equipped with firearms (Oliver and Atmore 2005, 101) that "had nearly completed the unification of Madagascar into a single, centralized state" (EB Merina) at the onset of colonization. During this process they displaced many older states on the island, as shown in Ajayi and Crowder's (1985) map of changes over time of states in Madagascar. The Merina are the **Highlanders**, who were distinguished from the non-centralized coastal Cotiers, the other EPR ethnic group in Madagascar (Schraeder 1995).

- *Sakalava. EPR group: Cotiers.* The Sakalava are one of many groups that compose the EPR group Cotiers. Their state had become marginal relative to the Merina state by the 19th century (EB Sakalava; Feeley-Harnik 1982), and they compose only 11% of the EPR group Cotiers (figures calculated from Ethnologue's estimate that there were 1.21 million Sakalava language speakers in Madagascar in 2014, the World Bank's estimate that Madagascar's total population in 2014 equaled 23.59 million, and EPR's data that Cotiers compose 47.9% of Madagascar's population).

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### A.2.22 Malawi

Candidate states from maps: Jumbe, Ngoni, Yao.

- *Jumbe. EPR group: none.* Jumbe was the chief of Nkhotakota, a group of villages that served as a depot for Swahili-Arab slave and ivory trading (Decalo 1997, 55; EB Nkhotakota). Nkhotakota corresponds with the EPR polygon for Chewa (Central), but there is no apparent connection between Jumbe and the Chewa ethnic group.
- *Ngoni. EPR group: none.* EPR does not code Ngoni as politically relevant. The scattered Ngoni settlements depicted in Ajayi and Crowder's (1985) map correspond with EPR's Chewa polygon, discussed below.
- *Yao. EPR group: Southerners (Lomwe, Mang'anja, Nyanja, Yao).* "The Yao were never united but lived as small groups ruled by chiefs who were predominantly military and commercial leaders" (EB Yao).

Candidate states from EB: Maravi Confederacy, Ngonde.

- *Chewa. EPR group: Chewa (Central).* The Chewa are descendants of the former Maravi Confederacy. This state had disintegrated by 1720 (EB Maravi Confederacy) and the Chewa did not subsequently achieve centralized political organization. "Peaceful farmers, the Chewa lived in decentralized federations of chiefdoms that in the 19th century fell to aggressive new arrivals—the Ngoni from the southwest, and Yao and Swahili slavers from the east" (Decalo 1998, 52).
- *Ngonde. EPR group: Northerners (Tumbuka, Tonga, Ngonde).* The Ngonde created a state with central institutions: "though the Ngonde state was atypical in the Malawi-Tanginyika corridor, it had many similarities with some of the Luba states in modern Zaire and with most of the interlacustrine states of East Africa. That of Ungonde was smaller in size compared to these, neither was its bureaucracy developed to the same extent as these or even some West African states such as Oyo or

Asante" (Kalinga 1979, 2). However, Ngonde compose too small a percentage of the EPR group "Northerners (Tumbuka, Tonga, Ngonde)" to code that EPR group as PCS, considering that Tumbuka and Tonga were not centrally organized (see EB Tumbuka, EB Tonga, and Decalo 1998, 53-4). Ethnologue provides recent estimates of 300,000 Nyakyusa-Ngonde, 2,200,000 Tumbuka, and 170,000 Tonga speakers in Malawi, putting Ngonde at 11% of these three groups.

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### A.2.23 Mali

Candidate states from maps: Tukulor.

- *Tukulor. EPR group: Blacks (Mande, Peul, Voltaic etc.).* The Tukulor empire stretched across most of territory where **Blacks (Mande, Peul, Voltaic etc.)** reside. This state conquered the Bambara (Mande) states of Segu and Kaarta and the Fulani state of Masina and lasted from 1850 until defeat by France (EB Tukulor empire, Oliver and Atmore 2005, 68). Warner (1999, 241) summarizes historians who argue the Tukulor empire "was the largest and most powerful state in Western Sudan . . . Its political system resembled a nascent state; due to the great size of the empire and the difficulties of communication, administration was decentralized but not absent: local power was held by emirs (either religious leaders or military commanders) who were 'vested with wide powers to rule the territories under them as long as they recognized the Shaikh's sovereign powers.' The government was financed by tribute from conquered polities and from foreign trade, predominantly France." It also had a large standing army and levied taxes as prescribed by the Koran (Kanya-Forstner 1971, 56-7).

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### A.2.24 Mauritania

Candidate states from maps: Aderer. Candidate ethnic groups from Murdock: Bedouin Arab groups (Delim, Regeibat, Trarza). Candidate states from EB Mauritania: Trarza and Brakna.

With one exception, the maps do not identify any states in Mauritania. Other sources mention emirates such as Trarza, Brakna, and Tagant (Warner 1990; Bennoune 1977; EB Mauritania). Johnston's (1884) map lists Aderer as a state.

- *Aderer*. "The population of the Adrar (Berber for "mountain") formerly was nomadic" (EB Adrar).
- *Trarza and Brakna*. There is no evidence of centralized organization within these emirates. "At the time of the French conquest, the tribe was the basic socio-political unit at the local level . . . most Saharan tribes have historically formed independent desert confederacies known as emirates or have been loosely linked to regional state and multi-ethnic empires. They all tended to share a common culture, language, and history. Mauretania was no exception. It was ruled after the eighth century by various emirs whose capital shifted from Adrar to Trarza" (Bennoune 1977, 4). The emirates ruled over nomadic or semi-nomadic populations (Eagleton 1965, 47, 49; Taylor 1995).

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### A.2.25 Mozambique

Candidate states from maps: none. Candidate states from EB Mozambique: Gaza.

- *Gaza. EPR group: none.* Ngoni migrants that originated from outside Mozambique founded Gaza in the 1830s (Omer-Cooper 1977, 349-50). EPR does not code Ngoni as a politically relevant ethnic group in Mozambique. The location of the Gaza state near Mozambique's modern-day capital Maputo is located in EPR's polygon for Tsonga-Chopi, who are distinct ethnic groups from Ngoni and were not centrally organized: "The Tsonga were formerly organized as independent peoples, each occupying its own territory and named for a powerful, dominant patrilineage. Early in the 19th century, however, they were conquered by other Nguni-speaking peoples" (EB Tsonga).

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### A.2.26 Namibia

Candidate states from maps: Herero and Nama.

- *Herero. EPR group: Herero, Mbanderu.* The Herero "were originally divided into autonomous political units under local headmen" (EB Herero). Grotpeter (1994) does not mention anything about centralized states in his "Herero" entry.
- *Nama. EPR group: Nama.* "The Nama were formerly reasonably prosperous sheep or cattle pastoralists" (EB Nama). Grotpeter (1994) does not mention anything about centralized states in his "Nama" entry.

Candidate states from EB Namibia: Ovambo.

- *Ovambo. EPR group: Ovambo.* According to EB Namibia, "In the north the Ovambo people developed several states on both sides of the Kunene River," which separates Namibia from Angola. However, like their fractured northern Angolan neighbors Ovimbundu-Ovambo—also not coded as PCS—the Ovambo in Namibia "had no single political authority, but several small states emerged in the 19th century" (Historical Dictionary of Pre-Colonial Africa, 337). One of the states, Ondonga, exhibited evidence of central institutions (Eirola 1992, 45), but it only composed between 10% to 25% of Ovamboland on the eve of colonization (31).

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### A.2.27 Niger

Candidate states from maps: none. Candidate states from EB: Takedda, Agadez, Bornu, Songhai empire, Fulani jihad states. Candidate ethnic groups from Murdock: Songhai.

- *Takedda and Agadez. EPR group: Tuareg.* Both states were controlled by the nomadic Tuareg in the north (Decalo 1990, 245; EB Niger; EB Tuareg).
- *Preface for remaining candidate states*. Referring to the sedentary ethnic groups in the south, "At the time of the colonial conquest, the disparate regions the French molded into an entity known as Niger may be best described as an assemblage of peripheral borderlands" (EB Niger). The following candidates are characterized as contributing refugees to Niger rather than to being native Nigerien states.
  - *Bornu. EPR group: Kanouri.* The Kanouri compose "remnants of Bornuan outposts from the days when Bornu controlled one-third of contemporary Niger" (Decalo 1990, 245). The capital of Bornu is in present-day Nigeria.
  - *Fulani jihad states and Hausaland. EPR groups: Peul, Hausa.* EPR codes Niger's Fulani as politically irrelevant. Notably, Niger's Fulani are distinguished from Nigeria's Fulani (who controlled the Sokoto Caliphate) because Britain and France purposely drew the northern border of Nigeria to correspond with the upper boundary of the Sokoto Caliphate (Touval 1966, 289), which is located in Nigeria. Regarding Hausa, most earlier Hausa states were destroyed during

the Fulani jihads that created states such as Sokoto in Nigeria. Newer Hausa states that reestablished themselves beyond Fulani control "were hardly free and independent, however, but rather subject to another power; in the case of Maradi and Zango, to Damagaram (Zinder), which was in turn a vassal to Borno" (Miles 1994, 65).

– *Dendi. EPR group: Djerma-Songhai.* Songhai are concentrated in the Dendi province of the ancient Songhai Empire. Although the lineage of the Songhai dynasty escaped to Dendi after the empire fell, it "was unable to regain the core of the empire that fell in due course to Tuareg arms. Dendi itself disintegrated into five or six mini-kingdoms . . . In the nineteenth century the area came under intense Tuareg military pressure, later also from the Fulani and lost much of its autonomy to one or the other of the two" (Decalo 1990, 244).

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### A.2.28 Nigeria

Candidate states from maps: Sokoto, Bornu, Benin, Yoruba states. Candidate ethnic groups from Murdock: Edo, Ife, Igala, Yoruba.

- *Sokoto. EPR group: Hausa-Fulani and Muslim Middle Belt.* The Sokoto caliphate was controlled by and covered the territory occupied by **Hausa-Fulani and Muslim Middle Belt**. "By the standard of political units in precolonial sub-Saharan Africa, Sokoto would rank among the most centralized, stable, and sizable. The rulers of the caliphate exercised some semblance of control over large parts of what is now northern Nigeria, with political units sharing a common religion, Islam. Over time, norms and practices developed to govern the relationship between the caliphs and the emirs, the underlings who exercised actual power over smaller territories. Political organization was inspired by the more complex political units of northern Africa, and written language was used to maintain records. The resulting political stability allowed for economic expansion, including the production of some luxury goods for export across the Sahara to North Africa" (Kohli 2004, 297).

- *Bornu. EPR group: none.* Bornu broke off from the ancient Kanem empire in the 14th century and later recaptured Kanem as a protectorate. Despite turmoil in the 19th century, it lasted until Sudanese slaver Rabih az-Zubayr defeated the state in 1893 (EB Bornu). Maps show that this state existed in the northeast corner of Nigeria, which does not correspond to an EPR ethnic group polygon (there is some intersection with the Hausa-Fulani and Muslim Middle Belt EPR ethnic group polygon, but the Sokoto Caliphate covers almost that entire EPR group).

- *Benin. EPR group: none.* Benin was the historical state of the Edo people, and it lasted until Britain destroyed the capital in 1897 (EB Benin). However, Edo do not correspond with any ethnic group

in the EPR dataset, and the capital of the Benin Empire, Edo (now called Benin city), is not located within the polygon of any EPR ethnic groups in Nigeria.

- *Yoruba states. EPR group: Yoruba.* The Yoruba were fractured into "some two dozen more or less autonomous political collectivities of varying sizes" (Kohli 2004, 293). The most powerful Yoruba state, Oyo, fell in the early 19th century to Fulani jihadists (EB Oyo empire), which preceded constant warfare among the Yoruba states (Kohli 2004, 295). Sklar and Whitaker (1966, 16) contrast pre-colonial states in Nigeria. "The political systems of Benin and Hausaland rest primarily on principles of stratification. Among both peoples the idea of a centralized state is well established." By contrast, "The traditional systems of both the Yoruba and Ibo nationalities rest primarily on principles of segmentation." The Murdock ethnic groups Ife and Igala are both located in the EPR polygon for Yoruba.

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### A.2.29 Rwanda

Candidate states from maps: Rwanda. Candidate ethnic groups from Murdock: Ruanda.

- *Rwanda. EPR group: Tutsi.* The Rwanda **Tutsi** empire lasted from the 15th or 16th century until the end of colonial rule (EB Rwanda). "By the end of the nineteenth century the Rwandese polity had achieved a remarkable degree of centralization" through the "twin processes of territorial expansion and consolidation" facilitated by "a strongly centralized state system—of a reliable corps of centrally appointed chiefs and an efficient military organization—[that] replace[d] the more or less autonomous kinship and clan structures on which the monarchy had initially relied to establish its rule" (Lemarchand 1977, 72). Tutsis monopolized power in the monarchy and dominated the more numerous Hutu (Lemarchand 1977, 68).

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### A.2.30 Senegal

Candidate states from maps: several traditional monarchies and jihad states.

- The once-powerful Jolof Empire collapsed in the 16th century and broke into constituent **Wolof**$^{*,\dagger}$ states of Walo, Kajor, Bawol, Jolof, and **Serer**$^{*,\dagger}$ states of Sin and Salum (Clark and Phillips 1994, 278).
- Two of the earliest Fulani jihads occurred in Senegal (EB Western Africa), establishing the **Pulaar (Peul, Toucouleur)**$^{*,\dagger}$ states of Bondu and Futa Toro.

- Evidence of centralization for both: "In terms of both military strength and economic resources, the strongest states were on the river banks and fertile plains between the Senegal and Gambia Rivers; in estimated ranked order, beginning with most powerful, these were: Kajoor, Saalum, Futa Toro, and, until its decline at the turn of the nineteenth century, Waalo. Population density and agricultural productivity were greater on these plains than in the Sahel and desert north of the Senegal, in the rain forest south of the Gambia, or on the highlands of the upper rivers area. Military power depended on infantry and cavalry armed with lances, spears, and muzzle-loading muskets, all of which could be acquired more readily by the plains states than by their neighbors" (Colvin 1977, 30-31).

Consistent with Ertan et al.'s (2016) early colonial onset date (1865), Pulaar, Wolof, and Serer are coded as experiencing early major colonial interference. Ajayi and Crowder's (1985) maps of West Africa show an expansion of French presence in areas corresponding with the EPR polygons for all three groups between 1850 and 1884, following French general Louis Faidherbe's campaigns to pacify the interior of Senegambia in the 1860s (which is Ertan et al.'s justification for coding colonial onset in the 1860s). In some cases (Futa Toro, Bawol), France militarily defeated existing states, whereas in others France exerted heavy influence starting in the 1860s or earlier (Bundu, Salum, Waalo). Entries in Clark and Phillips (1994) corresponding to these different states provide additional details.

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### A.2.31 Sierra Leone

Candidate states from maps: none. Candidate states from EB Sierra Leone: none.

### A.2.32 South Africa

Candidate states from maps: Zulu. Candidate ethnic groups from Murdock: Zulu, Xhosa.

- *Xhosa. EPR group: Xhosa.* Although they fought with European migrants in the 19th century, there is no evidence of centralized institutions (EB Xhosa).
- *Zulu. EPR group: Zulu.* "By the 1820s, a powerful **Zulu**[†] state, one of the most dominant polities in southern Africa, had emerged under the control of Shaka . . . He built a militarized, centralized state in this region, a core state surrounded by vassal communities in varying degrees of subordination who paid him tribute" (Saunders and Southey 2000, 286-7). Consistent with Ertan et al.'s (2016) early colonial onset date for South Africa (1780), Zulu are coded as early major colonial interference. The Zulu state experienced considerable pressure from and warfare with Boer migrants as early as the 1830s, although Britain did not begin the military campaigns that finally ended the kingdom until 1878 (Saunders and Southey 2000, 287-8).

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### A.2.33 Sudan

Candidate states from maps: Funj sultanate, Mahdist state, Fur. Candidate ethnic groups from Murdock: Fur, Messiria.

- *Mahdist state. EPR group: Shaygiyya, Ja'aliyyin, and Danagla (Arab).* Despite a long history of statehood along the Nile in Sudan, Sudan is difficult to code because of its earlier exposure to colonial rule compared to most of the rest of Sub-Saharan Africa. Following long rule by the Funj Sultanate (1504-1821), Egypt ruled central Sudan between 1821 and 1881 during a period of external rule known as the Turkiyah (because the Turkish Ottoman empire nominally ruled Egypt). Furthermore, in the two decades before British colonial rule began (the end of Sudan's pre-colonial period for the purposes of this article), the indigenously governed Mahdist state ruled Sudan (1881-1898). The capitals of the Funj (Sinnar), Turkiyah (Khartoum), and Mahdist states (Omdurman) were were each located along the Nile, where they exercised their greatest power (Collins 2008, 14, 20, 31). **Shaygiyya, Ja'aliyyin, and Danagla (Arab)**[†], also known as riverain Northern Sudanese (O'Fahey 1996, 259), reside in this territory. "The riverain Sudanese are overwhelmingly Arabic-speaking (with the exception of some Nubians), wholly Muslim and to a greater or lesser degree identify themselves genealogically and culturally as Arab" (O'Fahey 1996, 259). These tribes were closely affiliated with the Mahdist empire, as the first Mahdi was Danagla and drew considerable support from the Ja'aliyyin (Collins 2008, 22, 24). Holt and Daly (2011, 73) add: "Although the ideology and organization of the Mahdia reflected the outlook and aims of pious devotees, and although its victories would have been impossible without the Baqqara, the fruits of conquest fell largely to the riverain tribesmen, especially to the Danaqla and Ja'aliyyin of the dispersion. At the centre of this last group, called in Mahdist documents *Awlad al-balad*, (i.e., villagers, sedentaries) were the Mahdi's own kinsmen, the *Ashraf*." After Britain colonized Sudan, the need to pacify former beneficiaries of the pre-colonial Mahdist state encouraged Britain to "privileg[e] Arabic-speaking, northern riverain Muslims" (Sharkey 2003, 7, 9) in the colonial administration (also see O'Fahey 1996, 261-2).

  Regarding central institutions, "The Khalifa [ruler from 1885 through 1898 after the Mahdi's death] had transformed the theocracy of the Mahdi into an Islamic state with a centralized administration under his personal rule supported by a bureaucracy" (Collins 2008, 31). Theobald (1949, 177-8) provides additional details: "The Sudan was divided into provinces ... In each province there was a Ta'a'ishi Governor, responsible directly to the Khalifa, and the Governor was at once the supreme civil authority and military commander-in-chief. He was assisted by his own staff, consisting primarily of a judge, a treasurer, clerks and tax-collectors, all but the most subordinate of whom were appointed by the Khalifa ... The nucleus of the Khalifa's army was the *Jehadiya* or regulars, armed with rifles, of whom there was a permanent garrison of some 12,000 in Omdurman, with smaller numbers in the chief provincial garrisons." However, this case is coded as early major colonial interference because of the earlier Egyptian rule interlude.

  Although the Mahdist state was the only state in which any of these three tribes played a central ruling role, they exerted influence even in earlier states in Sudan. The Shaygiyya provided a key source of support for the Turkiyah state by providing irregular cavalry, which "led to the establishment of Shayqiyya colonies around the junction of the Niles and elsewhere" (Holt and Daly 2011, 4; also see Collins 2008, 11-12). Riverine Arabs' privileged position in the northern-ruled Turkiyah state enabled widespread benefits from the massive increase in slave raiding: "even the humblest families of the central riverain North were able to purchase a slave or two" (Sharkey 2003, 19). Earlier, the homelands of the three riverine tribes composed three core regions of the Funj sultanate (despite rule by the ethnically distinct Funj), during which they also developed their own local kingdoms (O'Fahey

and Spaulding 1974, 28-9, 31, 76, 96-7, 99, 101).

- *Fur. EPR group: Fur.* The **Fur** created a polity in which "the sultan exerted absolute authority . . . a centralized bureaucracy developed to aid the sultan with a *vizir*, council of state, system of taxation, and regulation of foreign affairs" (Lobban et al. 2002, 105). Although Mahdist rule disrupted the Fur sultanate, it existed when British colonial rule began in 1898 lasted until Britain deposed the last sultan in 1916.
- *Messiria. EPR group: None.* Population is largely nomadic (Joshua Project 2018).

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### A.2.34 Togo

Candidate states from maps: none. Candidate states from EB: none.

*Final note.* "Until 1884 Togoland was an indeterminate buffer zone between the warring states of Asante and Dahomey" (EB Togo). Decalo (1990, 207-8) provides additional details on the decentralized polities of pre-colonial Togo.

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### A.2.35 Uganda

Candidate states from maps: Buganda, Bunyoro, Ankole, and Toro. Candidate ethnic groups from Murdock: Ganda, Nkole, Nyoro, Toro.

- *Buganda. EPR group: Baganda.* The state of the **Baganda** "was founded in the late 14th century, when the kabaka, or ruler, of the Ganda people came to exercise strong centralized control over his domains, called Buganda. By the 19th century Buganda had become the largest and most powerful state in the region. The local chiefs of conquered areas ruled as personal appointees of the kabaka, who had a sizable army at his disposal" (Ingham 1958, 17).

- *Bunyoro, Ankole, and Toro. EPR group: South-Westerners (Ankole, Banyoro, Toro).* Regarding **South-Westerners (Ankole, Banyoro, Toro)***, "Bunyoro's sphere of influence was even more far-flung [compared to Buganda]: the Mukama (king) ruled through appointees who were kept loyal through family and clan ties, and by being required to return annually to the Mukama with their royal insignia" (Pirouet 1995, 7). Similarly, "The Nkole maintained a centralized state, headed by the mugabe (king)" (EB Ankole; see also Doornboos 1977) and Toro, which seceded from Bunyoro in 1830, also achieved "centralized political organization" (EB Toro) although "appears to have [been] a principality rather than a fully independent state" (Pirouet 1995, 77). Ankole compose 8% of the country's population, Banyoro 2.4%, and Toro 3.2% (Fearon 2003), and therefore the two that unambiguously qualify as states compose more than half of the population of the aggregate EPR ethnic group.

- *Final note on regional trends.* "A chain of new polities was emerging in the lacustrine region in the course of the sixteenth century—including Bunyoro, Buganda, Toro, Nkore, Rwanda, and Burundi—which had in common hierarchical systems, centralised kingship with important symbolic and ritual functions, and provincial governorships responsible for military mobilisation and resource extraction. They arose in one of the most fertile belts in sub-Saharan Africa, characterised by rich volcanic soil and good rainfall, sustaining a denser population than was possible elsewhere; this combination awarded these polities a level of stability and permanence lacking in other areas" (Reid 2012, 66-7).

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### A.2.36 Zambia

Candidate states from maps: Barotse and Kazembe. Candidate ethnic groups from Murdock: Lozi, Senga.

- *Barotse. EPR group: Lozi (Barotse).* Caplan (1970) describes the "extremely complex structure of this highly centralized state" (2) of the **Lozi (Barotse)** in which "struggles for power were largely concentrated at the capital" (2).

- *Kazembe. EPR group: Bemba speakers.* The Kazembes (kings) controlled a "centralized and ethnically heterogeneous state . . . Many of the Lunda adopted the Bemba language of their conquered subjects . . . During the hundred years from the mid-18th to the mid-19th centuries, the state of Kazembe dominated trade routes and much of the political life from Katanga to at least Lake Bangweulu and

actually much of northeastern Zambia" (Simon et al. 2007, 189-90). Separately, the Bemba ethnic group also formed "an extensive and relatively unified political system [distinct from Kazembe], in which a number of chiefs were subordinated to a single paramount" (Roberts 1973, xxvi; see also EB Bemba). Furthermore, "there is no doubt that Chitimukulu was, and is, a 'divine king' in the sense that his office is believed to carry with it supernatural control over the life and welfare of the land and people" (Roberts 1973, xxx). Kazembe and the Bemba composed the two major states in northeastern Zambia (Roberts 1973, xxvi), where the EPR group **Bemba speakers*** reside. Note that the Lunda group explicitly coded by EPR, Luanda (NW Province), is distinct from the Lunda in northeastern Zambia that ruled the Kazembe state.

- *Semba. EPR group: none.* Although located in the EPR polygon for Bemba speakers, the Semba are more closely related to Tumbuka (located mainly in Malawi, although Bemba, Semba, and Tumbuka are all Bantu groups), and there is no evidence of centralized institutions (EB Semba; Miracle 1962).

*References*


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### A.2.37 Zimbabwe

Candidate states from maps: Ndebele and Shona. Candidate ethnic groups from Murdock: Ndebele.

- *Ndebele. EPR group: Ndebele-Kalanga-(Tonga).* The Ndebele of the EPR group **Ndebele-Kalanga-(Tonga)** established a "highly formalized, pre-industrial, non-monetary, bureaucratic administration" (Chanaiwa 1976, 57). All state revenues—from conquest tribute to foreign trade—went directly to the king, the king directly appointed all administrators, and owned all the land and cattle in the country. The central institution of the Ndebele was its standing conscription army, which the king also controlled directly (Chanaiwa 1976, 57). Using 2010 language population figures from Ethnologue, the Ndebele compose 89% of Ndebele, Kalanga, and Tonga. This figure does not include an estimate for Tonga, which Ethnologue does not provide because the overwhelming majority of Tonga speakers are in Zambia rather than Zimbabwe (also see EB "Tonga (African people)").

- *Shona. EPR group: Shona.* The Shona were not centrally organized: "In the late 17th century the Changamire state rapidly developed into an empire that dominated more of the country than did any other precolonial state system . . . The Rozvi empire, like its predecessor states, was really more a confederation than a centralized polity. It comprised a collection of tribute-paying chiefdoms with their own dynasties. The tendency toward local autonomy was persistent, and by the late 18th century the 'empire' was disintegrating. The Mfecane invasions of the 1830s accelerated this process. Afterwards there were more than 100 independent Shona chiefdoms, many of which had to struggle for autonomy against the raids and tribute extractions of the newly arrived Ndebele and Gaza [NB: Gaza was in Mozambique] states" (Rubert and Rasmussen 2001, 298).

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## A.3 Comparison Between PCS Measure and Murdock

The conceptual similarities between the present PCS measure and Murdock's (1967) jurisdictional hierarchy measure raises questions about the distinctiveness and importance of the present coding exercise, especially given Wig's (2016) earlier advancement by systematically combining EPR and Murdock. Section 3.2.2 previewed the need for a new measure, and this section provides greater detail. It highlights the fairly large extent of disagreement between the measures and highlights problems with existing measures in three main ways. Table A.3 uses EPR groups as the unit of analysis and shows the large number of PCS groups that cannot be matched to a Murdock group with a jurisdictional hierarchy score of 3 or 4, which corresponds to large states: only 43% using Wig's (2016) merger of EPR and Murdock groups, and still only 50% after slightly revising Wig's measure. Table A.4 also uses EPR ethnic groups as the unit of analysis, but shows a different set of groups: those that Wig (2016) codes as jurisdictional hierarchy equals 3 or 4 by his merger of EPR and Murdock. It shows that only 38% of these EPR groups correspond with EPR groups in the present dataset coded as PCS. Finally, Table A.5 uses Murdock ethnic groups as the unit of analysis and lists every group with a jurisdictional hierarchy score of 3 or 4 (among ethnic groups located in a country in the sample for the present article). It shows that only 40% can be matched to an EPR group coded as PCS. Perhaps even more striking, nearly half (49%) of the groups do not exhibit evidence of a large state on the eve of colonization (i.e., independently of attempting to merge Murdock groups with EPR groups). Furthermore, the analysis shows that 38% of the groups that Murdock codes as states are partitioned across international boundaries, which highlights a major difficulty with combining Murdock's measure with EPR groups. In many cases, a group governed a state in one modern-day country, but not another one into which European powers partitioned it. However, Murdock assigns only score per group, causing measurement error for any ethnic group dataset (such as EPR) that distinguishes groups by country. The following provides additional detail on the tables.

Table A.3 lists every EPR ethnic group coded as PCS in the present dataset. The third column lists the Murdock ethnic groups that Wig (2016) matches to each EPR ethnic group. The fourth column revises the matched Murdock groups for several EPR groups. In some cases, there exists a Murdock group that corresponds with the EPR group and I changed Wig's matches (e.g., Highlanders in Madagascar only to Merina, and Baganda in Uganda to Ganda). In other cases, Wig matched EPR and Murdock groups entirely based on

location, and I restated these cases as "unclear." This does not imply that matching based purely on location is unreasonable for purposes of systematically combining the Murdock and EPR data sets, but Table A.3 attempts finer-grained matches for the PCS groups. I consulted Michalopoulos and Papaioannou's (2013) data for each group's jurisdictional hierarchy score. Michalopoulos and Papaioannou (2013) merged Murdock's (1959) ethnic group map and Murdock's (1967) jurisdictional hierarchy data from the *Ethnographic Atlas*, although in a handful of cases Michalopoulos and Papaioannou do not have an entry for a Murdock group that Wig codes as matching an EPR group. Also note, as the main text states, that many groups in Murdock's (1959) map lack an entry in the *Ethnographic Atlas*, and therefore are not coded on the jurisdictional hierarchy variable. The notes below the table address several difficult-to-match cases. All cases in which the median jurisdictional hierarchy score (Wig's (2016) coding procedure for EPR groups matched with multiple Murdock groups) equals 3 or 4 "agree," and the last row of the table states the percentage of cases that agree using both ways of matching EPR and Murdock.

Table A.4 lists every EPR ethnic group to which Wig (2016) matches Murdock ethnic group(s) with a jurisdictional hierarchy score of 3 or 4 (in cases where EPR ethnic groups are matched with multiple Murdock groups, he takes the median score). Unlike Table A.3, it uses Wig's matches without alterations. The fourth column summarizes that only 38% of EPR groups coded as having a large state in Murdock/Wig are also coded as PCS groups. The remaining columns show that coding discrepancies arise for three reasons. First, in 31% of the cases, Wig matched the EPR group with a Murdock group of a distinct ethnicity. In 13% of cases, the EPR group is matched with the correct Murdock group, but Murdock coded jurisdictional hierarchy equals 3 or 4 for a group that, according to the coding notes compiled for this article, is incorrect. (Hutu in Rwanda and Burundi are somewhat ambiguous because Murdock codes a single ethnic group in each country, i.e., not distinguishing Hutu and Tutsi. In both cases, Tutsi governed the pre-colonial kingdom. However this source of error is assigned, Hutu should not be coded as having a state.) In the final 19% of cases, the problem arises because a partitioned ethnic group governed a state in a different modern-day country from the EPR ethnic group.

Table A.5 lists every Murdock ethnic group scoring 3 or 4 on the jurisdictional hierarchy variable that resides in a country in the present sample (Michalopoulos and Papaioannou (2013) assign Murdock ethnic groups to one or several countries, although I coded the primary country location), although two of these groups primarily reside in countries outside the present sample. For each group, the third column states whether or not the Murdock group corresponds with an EPR ethnic group (40% agree). If not, it sorts the groups into three categories: groups for which there was evidence of centralized institutions but the group either does not correspond to an EPR group or composes only a small subset of an EPR group (11%), groups that at one time controlled a state with centralized institutions but that had declined considerably and/or had become tributary by the 19th century (20%), and groups with no evidence of centralization (29%). The coding process for the present PCS measure sampled all ethnic groups that Murdock codes as jurisdictional hierarchy equals 3 or 4, and therefore the coding notes above provide evidence to support these assessments. The fourth column states whether or not the group is partitioned across international boundaries, based on Michalopoulos and Papaioannou's (2013) criterion that at least 10% of the group's Murdock polygon is located in multiple countries. Although partitioned cases do not highlight any inherent source of error in Murdock's dataset—who coded ethnic groups, not countries—it highlights the difficulties of merging Murdock's data with datasets such as EPR that also take country location into account. Partitioned groups correspond with many of the disagreements between the present PCS measure and Wig's (2016) matched Murdock data, which Table A.4 shows.

## Table A.3: PCS Groups Matched with Murdock

| Country | EPR ethnic group | Wig Murdock match (JH score) | Revised Murdock match (JH score) |
|---|---|---|---|
| Angola | Mbundu-Mestico | Mbundu (2) | Unclear (1)[1] |
| Benin | South/Central (Fon) | Fon (3) | Fon (3) |
| Benin | Southeastern (Yoruba/Nagot and Goun) | Yoruba (3) | Yoruba (3) |
| Botswana | Tswana | Naron (0) | Ngwato (2) |
| Burundi | Tutsi | Ruanda (3) | Rundi (3) |
| Chad | Muslim Sahel groups | Kababish (?), Kanembu (1), Kanuri (2), Shuwa (2), Teda (1) | Unclear[2] |
| DRC | Luba Kasai | Luba (3) | Luba (3) |
| DRC | Luba Shaba | Luba (3) | Luba (3) |
| DRC | Lunda-Yeke | Yeke (?) | Unclear[3] |
| Ethiopia | Amhara | Amhara (3) | Amhara (3) |
| Ghana | Asante (Akan) | Ashanti (2) | Ashanti (2) |
| Guinea | Malinke | Malinke (1) | Malinke (1) |
| Guinea | Peul | No match | Fouta Djalon (2) |
| Madagascar | Highlanders | Makua (?), Merina (3), Tanala (1) | Merina (3) |
| Mali | Blacks (Mande, Peul, Voltaic etc.) | Bambara (1), Bozo (1), Dogon (1), Kasonke (2), Malinke (1), Nono (1), Soninke (2) | Bambara (1), Malinke (1), Tukulor (1) |
| Nigeria | Hausa-Fulani and Muslim Middle Belt | Tazarawa (2) | Hausa (2), Sokoto (0) |
| Rwanda | Tutsi | Ruanda (3) | Ruanda (3) |
| Senegal | Pulaar (Peul, Toucouleur) | Tukulor (1) | Tukulor (1) |
| Senegal | Serer | Serer (2) | Serer (2) |
| Senegal | Wolof | Wolof (2) | Wolof (2) |
| South Africa | Zulu | Zulu (3) | Zulu (3) |
| Sudan | Fur | Fur (3) | Fur (3) |
| Sudan | Shaygiyya, Ja'aliyyin and Danagla (Arab) | Barabra (0), Bisharin (1), Gimma (?), Ingas-Gan (0), Kababish (2), Nuer (0) | Unclear[4] |
| Uganda | Baganda | Haya (2) | Ganda (3) |
| Uganda | South-Westerners (Ankole, Banyoro, Toro, Banyarwanda) | Ganda (3), Nyoro (3), Ruanda (3), Toro (3) | Nkole (3), Nyoro (3), Ruanda (3)[5], Toro (3) |
| Zambia | Bemba speakers | Bemba (2) | Bemba (2) |
| Zambia | Lozi (Barotse) | Lozi (3) | Lozi (3) |
| Zimbabwe | Ndebele-Kalanga-(Tonga) | Ndebele (3) | Ndebele (3) |
| | **% agree** | **43%** | **50%** |

[1]There are two groups in Murdock's map located in Angola that, based on name, match the EPR group Mbundu-Mestico: Kimbundu and Mbundu. Based on location, the EPR Mbundu-Mestico polygon overlaps considerably with Kimbundu, whereas the Murdock Mbundu polygon overlaps considerably with the EPR polygon for Ovimbundu-Ovambo. However, according to Michalopoulos and Papaioannou (2013), the *Ethnographic Atlas* does not include information for Kimbundu (i.e., no jurisdictional hierarchy score).

[2]Combining the EPR group Muslim Sahelian groups with a Murdock group is exceedingly difficult because the EPR polygon intersects 22 distinct Murdock groups. The EPR Atlas states lists the Bideyat and Zaghawa as the two politically relevant ethnic groups among Muslim Sahelian groups. Although Murdock's map contains both these groups, according to Michalopoulos and Papaioannou (2013), neither has information in the *Ethnographic Atlas* (i.e., no jurisdictional hierarchy score). The Maba controlled the pre-colonial state Ouaddai, but they also lack information in the *Ethnographic Atlas*. One Murdock groups with which the EPR group Muslim Sahelian groups intersects, Bagirmi, has a jurisdictional hierarchy score of 3. However, as the coding notes for Chad discuss, Bagirmi was a subsidiary state throughout the 19th century.

[3]Although the EPR group Lunda-Yeke corresponds with the Murdock groups Lunda and Yeke, according to Michalopoulos and Papaioannou (2013), neither has information in the *Ethnographic Atlas* (i.e., no jurisdictional hierarchy score).

[4]Although the EPR group Shaygiyya, Ja'aliyyin and Danagla (Arab) correponds with Gaaliin and Shakia in Murdock's map, according to Michalopoulos and Papaioannou (2013), neither has information in the *Ethnographic Atlas* (i.e., no jurisdictional hierarchy score).

[5]Although Banyarwanda are correctly matched with Ruanda, the jurisdictional hierarchy score of 3 is inaccurate for Tutsi in Uganda, where they did not have a pre-colonial state. However, this does not change the score for the EPR group South-Westerners in Uganda because the median jurisdictional hierarchy score among matched Murdock groups is 3 regardless of whether or not the Ruanda score is used.

**Table A.4: Large States Using Murdock/Wig Data**

| **Country** | **EPR group** | **Murdock group (Wig)** | **Agree with PCS?** | **Different eth. grps.?** | **Murdock error?** | **Partitioned group?** |
|---|---|---|---|---|---|---|
| Benin | South/Central (Fon) | Fon | YES | - | - | - |
| Benin | Southeastern (Yoruba/Nagot and Goun) | Yoruba | YES | - | - | - |
| Burundi | Tutsi | Ruanda | YES | - | - | - |
| DRC | Luba Kasai | Luba | YES | - | - | - |
| DRC | Luba Shaba | Luba | YES | - | - | - |
| Ethiopia | Amhara | Amhara | YES | - | - | - |
| Rwanda | Tutsi | Ruanda | YES | - | - | - |
| South Africa | Zulu | Zulu | YES | - | - | - |
| Sudan | Fur | Fur | YES | - | - | - |
| Uganda | South-Westerners (Ankole, Banyoro, Toro) | Multiple | YES | - | - | - |
| Zambia | Lozi (Barotse) | Lozi | YES | - | - | - |
| Zimbabwe | Ndebele-Kalanga-(Tonga) | Ndebele | YES | - | - | - |
| Benin | Southwestern (Adja) | Fon | NO | YES | - | - |
| Botswana | Birwa | Ndebele | NO | YES | - | - |
| CAR | Sara | Bagirmi | NO | YES | - | - |
| Chad | Sara | Bagirmi | NO | YES | - | - |
| Eritrea | Christians | Amhara | NO | YES | - | - |
| Ghana | Northern Groups (Mole-Dagbani, Gurma, Grusi) | Mossi | NO | YES | - | - |
| Namibia | Basubia | Lozi | NO | YES | - | - |
| Namibia | Kavango | Lozi | NO | YES | - | - |
| Namibia | Mafwe | Lozi | NO | YES | - | - |
| Sudan | Masalit | Fur | NO | YES | - | - |
| Niger | Kanouri | Kanuri | NO | NO | YES | - |
| Burundi | Hutu | Ruanda | NO | NO | YES | - |
| Djibouti | Isaas (Somali) | Esa | NO | NO | YES | - |
| Rwanda | Hutu | Ruanda | NO | NO | YES | - |
| DRC | Tutsi-Banyamulenge | Ruanda | NO | NO | NO | YES |
| Nigeria | Yoruba | Yoruba | NO | NO | NO | YES |
| South Africa | Ndebele | Ndebele | NO | NO | NO | YES |
| South Africa | South Sotho | Sotho | NO | NO | NO | YES |
| South Africa | Swazi | Swazi | NO | NO | NO | YES |
| Uganda | Banyarwanda | Ruanda | NO | NO | NO | YES |
| | | **% total** | **38%** | **31%** | **13%** | **19%** |

## Table A.5: Large States Using Murdock's Original Data

| Primary country | Ethnic group | Correspond with PCS group? | Partitioned? |
|---|---|---|---|
| Benin | Fon | YES | YES – Togo |
| Burundi | Rundi | YES | YES – Rwanda |
| DRC | Luba | YES | NO |
| Ethiopia | Amhara | YES | YES – Sudan |
| Lesotho | Sotho | YES (not in sample)* | YES – South Africa |
| Madagascar | Merina | YES | NO |
| Rwanda | Ruanda | YES | YES – Burundi, DRC, Uganda |
| South Africa | Zulu | YES | NO |
| Sudan | Fur | YES | YES – Chad |
| Swaziland | Swazi | YES (not in sample)* | YES – South Africa |
| Uganda | Ganda | YES | NO |
| Uganda | Nkole | YES | YES – Rwanda |
| Uganda | Nyoro | YES | NO |
| Uganda | Toro | YES | YES – DRC |
| Zambia | Lozi | YES | NO |
| Zimbabwe | Ndebele | YES | YES – Botswana |
| Cameroon | Mum | NO – State, but no EPR group (or is subset) | NO |
| Chad | Bagirmi | NO – Declined state | NO |
| DRC | Suku | NO – State, but no EPR group (or is subset) | NO |
| Djibouti | Esa | NO – Not centralized | YES – Ethiopia |
| Ethiopia | Gibe | NO – Not centralized | NO |
| Ethiopia | Janjero | NO – Not centralized | NO |
| Ethiopia | Kafa | NO – State, but no EPR group (or is subset) | NO |
| Ghana | Dagomba | NO – Declined state | YES – Togo |
| Kenya | Gyriama | NO – Not centralized | NO |
| Madagascar | Sakalava | NO – Declined state | NO |
| Niger | Songhai | NO – Declined state | YES – Mali |
| Mauritania | Delim | NO – Not centralized | NO |
| Mauritania | Regeibat | NO – Not centralized | NO |
| Mauritania | Trarza | NO – Not centralized | NO |
| Nigeria | Edo | NO – State, but no EPR group (or is subset) | NO |
| Nigeria | Ife | NO – Declined state | NO |
| Nigeria | Igala | NO – Declined state | NO |
| Nigeria | Yoruba | NO – Declined state | NO† |
| South Africa | Xosa | NO – Not centralized | NO |
| Sudan | Messiria | NO – Not centralized | NO |
| Zambia | Senga | NO – Not centralized | NO |
| | | **40% in sample correspond with PCS group** | **38% partitioned** |
| | | **51% in sample w/ EV of large state in 19th cent.** | |

*Lesotho and Swaziland are not in the sample for this article, although clear evidence exists that Sotho and Swazi, respectively, governed pre-colonial states in territory corresponding with their respective modern countries. Table A.5 lists these groups because each is also partitioned into South Africa. They are included in the figure stated at the bottom of column 4 but not the figures stated at the bottom of column 3.

†Michalopoulos and Papaioannou (2013) do not code Yoruba as partitioned because its entire Murdock polygon lies within Nigeria, but as shown in tables above, there are also politically relevant Yoruba groups in Benin that composed a pre-colonial state.

# B Supporting Information for Sections 1 and 2

The end of the appendix contains full citations for all references in this section.

## B.1 Key Assumptions about Ethnicity, Civil Wars, and Coups

Existing ethnic conflict research often makes two assumptions: (1) ethnic identity helps to explain motives for civil wars and for coups, even though actors rarely defend these events purely in ethnic terms, and (2) insurgencies and coups provide alternative technologies for achieving concessions from governments if bargaining fails, even though these processes also differ in important ways. The present theoretical framework adopts these premises, which this section defends at greater length.

First, scholars have proposed various mechanisms to link ethnicity to different conflict technologies (Fearon 2006 provides a broader overview). Some argue that the spread of nationalism to the colonial and post-colonial worlds created ideas that "ethnic likes should rule over ethnic likes" (Cederman, Wimmer and Min, 2010, 92), and turned the state into an non-ethnically neutral arena for exercising power (Cederman, Gleditsch and Buhaug, 2013, 26-7). Roessler (2011, 313) claims that ethnic identity can serve as an "information shortcut" for distinguishing loyalists from disloyal actors, despite explicitly not "arguing that competing elites are necessarily motivated by ethnic aims." Therefore, in tenuous post-colonial ruling coalitions, ethnicity could serve as a useful basis for structuring the regime even if actors did not perceive ethnic identity as inherently important. Horowitz (1985) links ethnicity to coups and civil wars on the basis of perceived group superiority. Denny and Walter (2014) argue that ethnic groups often grievances because of historical factors that promoted the salience of ethnic identity, that ethnic groups often live in concentrated spaces that creates opportunity for rebellions, and that bargaining breakdown is particularly likely in the face of ethnic divisions because ethnic identity is immutable.

Second, Roessler (2016, 37) discusses important similarities in aims between coups and civil wars. "I conceive of coups and rebellions, or insurgencies, as analogues; both represent anti-regime techniques that dissidents use to force a redistribution of power. They can be distinguished, however, by their organizational basis. Coup conspirators leverage partial control of the state (and the resources and matériel that comes with access to the state) in their bid to capture political power . . . In contrast, rebels or insurgents lack such access and have to build a private military organization to challenge the central government and its military." Emphasizing these similarities does not deny that coups and civil wars sometimes seek divergent military aims (e.g., some civil wars seek to create an autonomous or independent region rather than to capture power at the center). For the present purposes, the key point is that a rival can challenge the government via a coup or a rebellion—as opposed to peacefully negotiating a deal with the government—which is a useful simplification for thinking about causes of conflict. The broader idea that failed bargaining negotiations lead to costly fighting relates to a large formal theoretic literature on international warfare (Fearon, 1995), civil war (Fearon, 2004; Powell, 2012*b*; Paine, 2016), and coups (Acemoglu and Robinson, 2006).

## B.2 Additional References for Cases Discussed in Section 2.2

- Angola: Le Billon (2007, 101-2) for rebel group splits
- Benin: Decalo (1990, 91) for pre-colonial war, Decalo (1973) for decolonization party splits, Hargreaves (1969, 216) for Dahomey leader descending from the former royal house. Regarding indirect rule, Thompson (1963, 169) argues that Benin differed from the rest of French West Africa in several

respects: "the survival of more traditional chiefs in the south, the regional differences that continued to differentiate the Abomey area from that of Porto Novo [NB: two separate PCS groups resided in these territories], and the sharper cleavage between the northern and southern parts of the country."

- Chad: Decalo (1980, 483) for slave trade, Nolutshungu (1996) for decolonization party splits. Regarding indirect rule, Nolutshungu (1996, 29) argues: "There was more respect for precolonial social distinctions and authority systems of the Islamic North, and therefore a greater willingness to assimilate them into a kind of 'indirect rule'." Whereas France granted Christian missionaries wide leeway in southern Chad, they were not allowed to interfere in the Islamic north (similar to Britain's dual policy in Nigeria and Sudan).
- Ethiopia: Clapham (1977) for ruling monarchy
- Ghana: Boone (2003, 159) for indirect rule
- Madagascar: Minorities at Risk "Merina" (2006) for slave trade, Thibaut (1999) for decolonization party splits
- Mali: Krings (1995, 58) for slave trade
- Nigeria: Sklar and Whitaker (1966, 19-21) for indirect rule, Lovejoy (1992, 28,34) and Christopher (1984, 82) for Christian missionaries
- Rwanda and Burundi: Young (2006, 309) for indirect rule, Lemarchand (1977*b*,*a*) for ruling monarchy
- Regarding indirect rule, Boone (2003, 49) argues: "In *pays Wolof*, France imposed itself upon an old, hierarchical society that had possessed state structures of its own. France's de facto strategy, pursued with striking consistency, was 'to take all possible advantage of the existing order' by collaborating with indigenous elites."
- Sudan: Sharkey (2003, 19-21) for slave trade, Ofcansky (1992, 31-2) for slave trade and decolonization party splits, Sharkey (2008, 29) for durable and divisive identities; Holt and Daly (2014, 104) and Christopher (1984, 82) for Christian missionaries; Sharkey (2003, 7,9) and O'Fahey (1996, 260-1) for indirect rule as a pacification strategy
- Uganda: Reid (2012, 115-6) for pre-colonial war and slaving, Rothchild and Rogin (1966, 341) for indirect rule
- Zambia: Caplan (1970) for indirect rule
- Zimbabwe: Wilson (1994, 191) for rebel groups splits

### B.3 Hypotheses about Violence Conditional on Ethnopolitical Representation Status

This section continues the discussion from Section 2.4 by generating implications for ethnic violence conditional on ethnopolitical representation status. The next section formalizes these and the main hypotheses. A strategic selection effect anticipates that even when conditioning on ethnopolitical exclusion, PCS and SLPCS groups should each fight civil wars more frequently than SL groups. Recall the logic from Table 1 that the rival can either be coercively strong or weak, and that all rulers will exclude weak groups. The internal security dilemma that rulers in PCS countries face (Assumption 1) raises their incentives to exclude coercively strong rivals—despite a strong rival's credible threat to rebel conditional on exclusion (see the top-right box in Table 1). By contrast, in countries where rulers have greater ability to commit to deals, lower strategic incentives for exclusion implies that rulers will share power with strong groups to prevent

civil wars. These rulers will only exclude *weak* groups—i.e., opportunistic exclusion because weak groups rebel with low probability when excluded (see the left column of Table 1). This strategic selection effect causes a higher percentage of excluded groups in PCS countries than in non-PCS countries to be the strong type, which yields the next two hypotheses.

> **Hypothesis 4.** *Conditional on ethnopolitical exclusion, PCS groups should participate in civil wars more frequently than SL groups.*

> **Hypothesis 5.** *Conditional on ethnopolitical exclusion, SLPCS groups should participate in civil wars more frequently than SL groups.*

This logic also explains why the theoretical expectations for PCS groups and civil wars are ambiguous, i.e., no analog of H1 for PCS groups. Although they should tend to rebel when excluded (H4), PCS groups' historical advantages for gaining access to power (Assumption 2) should decrease their usage of outsider rebellion techniques.

Finally, conditional on ethnopolitical inclusion, PCS groups should attempt coups more frequently than SL groups. Low commitment ability (Assumption 1) makes any group in a PCS country more likely to attempt a coup, and PCS groups' historical privileges (Assumption 2) enabled them to often be included in power despite general strategic incentives for exclusion (i.e., even if commitment ability is low and they are the strong type; see the top-right box in Table 1). There is no analog of H6 for SLPCS groups because they did not share these historical privileges, which means that they should usually be excluded from power if they are the strong type and pose a coup threat. This logic also explains why the overall theoretical expectations between SLPCS groups and coups are ambiguous, i.e., no analog of H2 for SLPCS groups.

> **Hypothesis 6.** *Conditional on ethnopolitical inclusion, PCS groups should participate in coups (attempted and successful) more frequently than SL groups.*

## B.4 Formal Rationale for the Hypotheses from Sections 2.4 and B.3

This section presents a simple game theoretic interaction to provide formal rationale for the six hypotheses. The setup incorporates and formalizes core elements of a ruler's ethnopolitical inclusion choice and the coup-civil war tradeoff, introduced in Roessler (2011, 2016) and related research (as the article summarizes). The analysis first assesses the full range of strategic options and derives optimal actions. It then introduces probabilities over key choices and parameters—whether the government faces impediments to excluding the rival, the probability that government commitment ability is high, and the coercive strength of the rival—and links these to the two foundational assumptions about pre-colonial statehood. The hypotheses stated in the article follow.

### B.4.1 Model Setup

Consider a strategic interaction between two players that sequentially make one choice each: a *government* either includes or excludes a *rival* from power in the central government, and then the rival decides whether to initiate either a coup attempt (only possible if included) or civil war (only possible if excluded).

If the rival is excluded and does not fight, then the rival consumes $r_e$ and the government consumes $1 - r_e$, where the prize of controlling the government equals 1 and $r_e > 0$ are the rival's rents under exclusion. If

the rival is included in power does not fight, then expected consumption depends on the government's ability to commit to sharing power and rents. If the government can credibly commit to, for example, allow the rival to control valuable cabinet positions, then the rival consumes a higher rent $r_i \in (r_e, 1)$. However, if the government cannot credibly commit, then the rival consumes the same amount as under exclusion, $r_e$. In either case, the government consumes the remainder. The indicator parameter $\gamma_c$ equals 1 if commitment ability is high, and 0 if commitment ability is low.

If the rival fights, then consumption depends on its ethnopolitical inclusion status and its coercive strength. There are two possible types of rival, coercively strong and coercively weak. The strong type of rival wins a fight with probability $p_e > 0$ if excluded (civil war) and probability $p_i \in (p_e, 1)$ if included (coup), and the government wins with complementary probability. This captures the intuitive idea (and corresponding fear for the ruler) that insider coup attempts succeed with higher probability than outsider rebellions. By contrast, the weak type wins both types of fights with probability 0. The indicator parameter $\gamma_s$ equals 1 if the rival is strong, and 0 if weak. The winner of a fight consumes $1 - \phi$, which equals the total prize of controlling the government minus fighting costs $\phi > 0$. Therefore, total surplus is higher if the actors strike a peaceful bargain rather than fight. Imposing restrictions on the fighting cost focus the analysis on the substantively interesting parameter range, narrowing the focus such that differences between low and high commitment ability and between low and strong rival coercive strength generate differences in behavior.

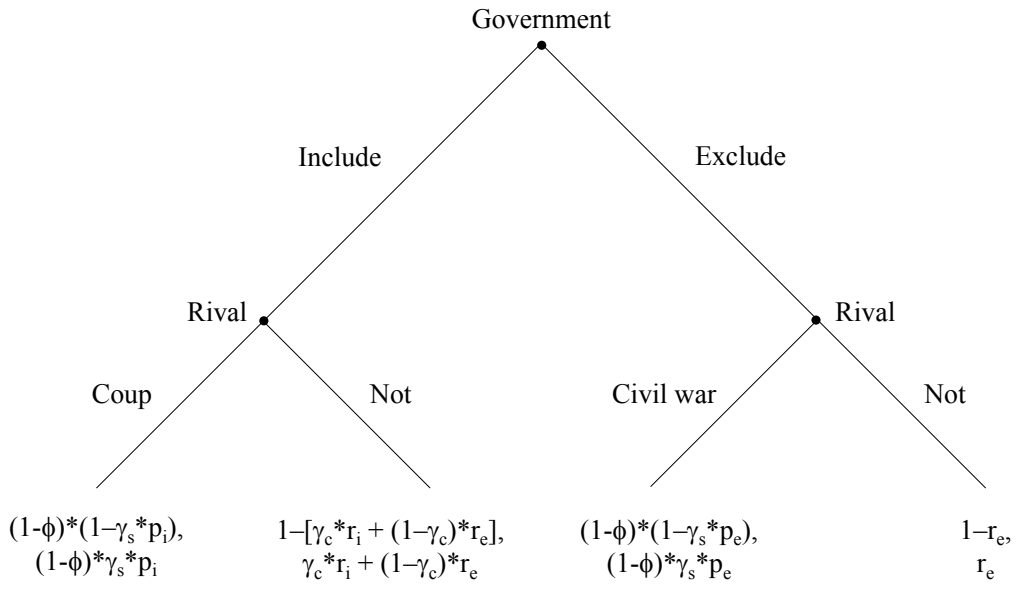
**Assumption B.1.** $\phi < 1 - \dfrac{r_e}{p_e}$

**Assumption B.2.** $\phi > 1 - \dfrac{r_i}{p_i}$

**Assumption B.3.** $\phi > \dfrac{r_i - p_e}{1 - p_e}$

Figure B.1 presents the game tree.

**Figure B.1: Game Tree**



### B.4.2 Optimal Choices

The following solves for a subgame perfect Nash equilibrium strategy profile (which is unique). Solving for the rival's optimal fighting decisions following the government's ethnopolitical access choice, weak rivals will never fight regardless of ethnopolitical access because $r_i > r_e > 0$. If excluded, Assumption B.1 implies that a strong rival will initiate a civil war. That is, the costs of fighting are small enough to generate the intuitive implication that coercively strong groups will rebel if excluded from power. If included in power, then Assumptions B.1 and B.2 imply that a strong rival will not stage a coup if commitment ability is high but will if commitment ability is low. This captures the intuitive idea that high commitment ability fosters peace, whereas low commitment ability causes fighting if the rival has coercive power.

Combining the rival's optimal choices with the government's optimal actions recovers the logic shown in Table 1. If the rival is weak, then the government will exclude the rival because $r_i > r_e$. This is opportunistic exclusion (see the left column of Table 1). If the rival is strong, then the government will exclude if commitment ability is low because $p_i > p_e$. This is the coup-civil war case and expresses strategic exclusion (see the top-right box of Table 1). However, if the rival is strong and commitment ability is high, then Assumption B.3 implies that the government will include, i.e., it prefers to peacefully buy off an included rival—despite distributing higher rents—than face a rebellion (see the bottom-right box of Table 1).

### B.4.3 Probabilities of Different Events

This section presents probability distributions for several key parameters and for reaching different information sets, and also introduces notation relevant to pre-colonial statehood in order to derive the equilibrium probabilities of different events. Three Nature moves occur before the strategic interaction starts (not depicted in Figure B.1).

1. The probability that government commitment ability is high equals $C_k$, for $k \in \{P, S\}$, with $P$ standing for PCS country and $S$ for non-PCS (i.e., stateless) country. Consistent with the motivation for Assumption 1, assume $C_P < C_S$, i.e., institutions and the ability to commit to sharing rents and power is higher in non-PCS countries than in PCS countries.

2. There is an exogenous probability that the government must share power with the rival, and therefore the only strategic move in the game is the rival's decision to stage a coup or not while included in power. This probability equals $\beta_j$, which relates to the substantive considerations in the article regarding circumstances in which it is difficult for rulers to exclude rivals. This parameter is indexed by $j \in \{pcs, slpcs, sl\}$. Consistent with the motivation for Assumption 2, assume $\beta_{slpcs} < \beta_{sl} < \beta_{pcs}$.

3. Assume that the rival is strong with probability $s \in (0, 1)$ and weak with complementary probability. This section assumes that the distribution of strong and weak types is identical for each type of ethnic group (i.e., PCS, SLPCS, or SL), and Section B.5 examines the consequences of assuming that PCS groups are more likely to be the strong type.

Combining equilibrium choices with the assumed probability distributions enables deriving the equilibrium probabilities of different events. There are two paths to the rival gaining inclusion at the center.

1. Exogenous power-sharing: with probability $\beta_j$, the government faces constraints that force it to share power with the rival.

2. Strategic power-sharing: with probability $(1-\beta_j)\cdot s\cdot C_k$, the ruler can decide whether or not to share power, and chooses to include the rival because the rival is strong and commitment ability is high.

This yields the equilibrium probability of inclusion:

$$Pr(\text{inclusion}) = \underbrace{\beta_j}_{\text{Exogenous}} + \underbrace{(1-\beta_j)\cdot s\cdot C_k}_{\text{Strategic}} \tag{B.1}$$

There are also two paths to exclusion.

1. Opportunistic exclusion: with probability $(1-\beta_j)\cdot(1-s)$, the ruler can decide whether or not to share power, and excludes the rival because it is weak.
2. Strategic exclusion: with probability $(1-\beta_j)\cdot s\cdot(1-C_k)$, the ruler can decide whether or not to share power, and excludes the rival because it is strong and commitment ability is low.

This yields the equilibrium probability of exclusion:

$$Pr(\text{exclusion}) = (1-\beta_j)\cdot\Big[\underbrace{1-s}_{\text{Opportunistic}} + \underbrace{s\cdot(1-C_k)}_{\text{Strategic}}\Big] \tag{B.2}$$

Conditional on exclusion, the probability of civil war equals 1 if the rival is the strong type (strategic exclusion) and 0 if the rival is the weak type (opportunistic exclusion). Given the probabilities just derived, the equilibrium probability of civil war under exclusion equals:

$$Pr(\text{civil war} \mid \text{exclusion}) = \frac{\overbrace{s\cdot(1-C_k)}^{\text{Strategically excluded}}}{\underbrace{1-s+s\cdot(1-C_k)}_{\text{All excluded}}} \tag{B.3}$$

Conditional on inclusion, the probability of a coup attempt equals $1-C_k$ if the rival is the strong type (this is the probability that commitment ability is low) and 0 if the rival is the weak type. Given the probabilities just derived, the equilibrium probability of a coup attempt under inclusion equals:

$$Pr(\text{coup} \mid \text{inclusion}) = \frac{\overbrace{\beta_j\cdot s\cdot(1-C_k)}^{\text{Exo. incl. w/ strong rival and weak commit.}}}{\underbrace{\beta_j+(1-\beta_j)\cdot s\cdot C_k}_{\text{All included}}} \tag{B.4}$$

Combining these terms yields the overall equilibrium probabilities of a civil war and of a coup attempt. Either event occurs only if the rival is strong and commitment ability is low. If the government is able exclude the challenger, then it chooses exclusion and civil war occurs. If instead the government cannot choose to exclude the rival, then a coup attempt occurs.

$$Pr(\text{civil war}) = (1-\beta_j)\cdot s\cdot(1-C_k) \tag{B.5}$$

$$Pr(\text{coup}) = \beta_j\cdot s\cdot(1-C_k) \tag{B.6}$$

### B.4.4 Hypotheses

Combining these equilibrium event probabilities with the two foundational assumptions about pre-colonial statehood yields the hypotheses.

- Hypothesis 1 follows from comparing Equation B.5 between SLPCS and SL groups and assuming $\beta_{slpcs} < \beta_{sl}$ and $C_P < C_S$. There is no corresponding implication for PCS groups because $\beta_{sl} < \beta_{pcs}$.
- Hypothesis 2 follows from comparing Equation B.6 between PCS and SL groups and assuming $\beta_{sl} < \beta_{pcs}$ and $C_P < C_S$. Related, the same logic holds for successful coups, which can be seen by multiplying Equation B.6 by $p_i$. There is no corresponding implication for SLPCS groups because $\beta_{slpcs} < \beta_{sl}$.
- Hypothesis 3 follows from comparing Equation B.1 between SLPCS and SL groups and assuming $\beta_{slpcs} < \beta_{sl}$ and $C_P < C_S$. There is no corresponding implication for PCS groups because $\beta_{sl} < \beta_{pcs}$. Furthermore, $\beta_{slpcs} < \beta_{pcs}$ implies that PCS groups should be included more frequently than SLPCS groups.
- Hypotheses 4 and 5 follow from comparing Equation B.3 between each of PCS and SLPCS groups with SL groups, and assuming $C_P < C_S$.
- Hypothesis 6 follow from comparing Equation B.4 between PCS and SL groups and assuming $\beta_{sl} < \beta_{pcs}$ and $C_P < C_S$. There is no corresponding implication for SLPCS groups because $\beta_{slpcs} < \beta_{sl}$.

## B.5 PCS Groups as the Strong Type

The two main assumptions about PCS groups do not address their internal organization and capacity. This section extends the formal model from the previous section to incorporate the plausible additional consideration that a history of political hierarchy made PCS groups more likely to be the strong type of challenger, and shows that the logic is unchanged for all six hypotheses. This extension incorporates the idea from earlier research that pre-colonial statehood strengthens institutions and coordination (Bockstette, Chanda and Putterman, 2002; Gennaioli and Rainer, 2007; Michalopoulos and Papaioannou, 2013; Wig, 2016)—but only within the PCS group *and not* for the country as a whole. The many examples presented in the main text, especially during the decolonization era, ground the present argument that PCS groups created a fractured political scene at the country level—in part *because* of their greater internal coherence.

This section imposes the additional assumption that PCS groups are more likely to be the strong type of rival than are other types of groups. Denote $s_j$ as the probability a group is strong and assume $1 > s_{pcs} > s_{slpcs} = s_{sl} > 0$. Hypotheses 1, 3, and 5 are unaltered because they compare SLPCS and SL groups, which are not affected by this new assumption. Examining Equation B.6 shows that the new assumption reinforces the higher propensity for PCS groups to attempt coups relative to SL groups. Examining Equation B.3 shows that the new assumption reinforces the higher propensity for PCS groups to rebel relative to SL groups conditional on exclusion (this follows from the right-hand side of the equation strictly increasing in $s$). In fact, assuming PCS groups are more likely to be the strong type implies that the magnitude of the effect under exclusion should be larger for PCS groups than for SLPCS groups, which Table D.16 shows. Finally, examining Equation B.4 shows that the new assumption reinforces the higher propensity for PCS groups to attempt coups relative to SL groups conditional on inclusion (this follows from the right-hand side of the equation strictly increasing in $s$).

## B.6 Split Domination

An alternative mechanism from the literature that can potentially explain the relationship between PCS and violence relates to patterns of ethnic recruitment during colonial rule. Horowitz (1985) argues that countries faced particularly high coup risks after independence when they inherited "split domination" regimes in which different ethnic groups controlled top civilian (political, bureaucratic) and military (officer corps) positions. Split domination cases usually resulted from colonizers preferring "backward" groups to staff the military to ensure loyalty (in line with misguided "martial race" theories) whereas more economically and educationally advanced groups often dominated the bureaucracy and, later, key political positions. This does not provide a likely alternative *explanation* for PCS because many PCS groups fit the profile of ethnic groups for which colonizers should prefer for bureaucratic positions but discriminate against for military positions. However, it does provide an alternative *mechanism* for the argument here that PCS groups engendered violence by fostering ethnically oriented parties, which undermined inter-ethnic organizations and created country-wide spillover effects in the sense of weak government commitment. Split domination focuses specifically on the ethnicity of the groups that dominated civilian and military positions at independence rather than on the ethnic orientation of political parties and other groups.

Two pieces of evidence show that martial race recruitment and split domination cannot account for the relationship between PCS groups and violence. First, the relationship between PCS and skewed recruitment patterns is weak. Table B.1 examines three dependent variables. Column 1 uses countries as the unit of analysis and analyzes Harkness's (2018) unmatched officer corps indicator. This variable equals 1 in countries if, during decolonization, the officer corps was either diverse or was dominated by one or several ethnic groups that did not match the ethnicity or region of the new leader. Countries with matched rulers and officer corps equal 0, as do countries in which no Africans belonged to the officer corps at independence. The remaining columns use ethnic groups as the unit of analysis. The dependent variable in Columns 2 and 3 indicates whether an ethnic group dominated the officer corps at independence, scored using Harkness's (2018) coding notes. Columns 4 and 5 use Ray's (2013) variable that equals a group's percentage share of the police manpower in its colony of residence on the eve of independence relative to its percentage share of the colony's population. Columns 1, 2, and 4 do not contain additional covariates, and Columns 3 and 5 contain country fixed effects. Whether examining country-level or group-level patterns—and for the latter whether including country fixed effects or not—and regardless of the dependent variable, the PCS indicator does not systematically correlate with the martial race or split domination outcome variable.[127]

**Table B.1: Pre-Colonial Statehood, "Martial Race" Recruitment, and Split Domination**

| DV: | Unmatched | Military dominance | | Police imbalance | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PCS indicator | 0.991 | -0.0253 | 0.388 | 0.847 | 0.344 |
| | (0.688) | (0.594) | (1.002) | (0.813) | (0.814) |
| Units | 37 | 165 | 101 | 68 | 68 |
| R-squared | | | | 0.178 | 0.001 |
| Unit of analysis | Country | Group | Group | Group | Group |
| Country FE | NO | NO | YES | NO | YES |
| Model | Logit | Logit | Logit | OLS | OLS |

*Notes*: The preceding text explains the dependent variables used in the different specifications. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Second, split domination does not help to distinguish which PCS countries experienced violence versus not:

[127] The police imbalance results differ from those in Ray (2013), who shows a statistically significant negative correlation between Murdock's centralization variable and the police imbalance variable. Unreported results using his replication data shows that, within Africa, there is either a null or a positive correlation between Murdock centralization and police imbalance.

split domination is rare among PCS countries, and PCS countries also exhibited considerable violence even when a single group dominated top civilian and military positions. Table B.2 groups PCS countries according to the composition of the civilian leadership (using data from EPR) and of the military at independence (using data from Harkness (2018)). Two patterns show that split domination cases cannot account for the PCS result. The first is that split *domination* involving a PCS group—i.e., a PCS group is senior partner or higher but a different ethnic group dominates the military, or vice versa—is empirically rare, occurring only in Nigeria, Benin, and Madagascar.[128] Although rulers may have still exhibited the types of fears described by Horowitz (1985) in any country where multiple ethnic groups had a foothold in civilian and/or military positions, this observation questions the specific argument that coups often occur because of fear that institutions controlled by different ethnic groups could become "potential master[s] of the other" (457)—at least among PCS countries.

**Table B.2: Who Dominated Civilian Positions and the Military in PCS Countries?**

| | PCS dominates military | SLPCS dominates military | No military dominance |
|---|---|---|---|
| **PCS monopoly/dominant** | **Angola**, **Mali**, **Sudan**[8] | - | Ethiopia[5] |
| **PCS senior partner** | - | **Nigeria** | Botswana[2], Burundi[3], Guinea[6], Senegal[7], Uganda[9], Zambia[10] |
| **PCS junior partner** | **Benin**[1] | Ghana | South Africa, Zimbabwe |
| **PCS excluded** | **Madagascar** | **Chad**, **Rwanda** | DRC[4] |

*Notes*: Split domination regimes involving a PCS group in **blue**, and borderline split domination regimes in blue. Ethnic dominance regimes in **red**, and borderline ethnic dominance regimes in red. The rows use EPR's ethnopolitical inclusion data in the year of independence to sort countries. The columns use Harkness's (2018) data on military composition at independence. The following notes explain cases with multiple PCS groups and other relevant details. 1. Benin's two PCS groups (Fon and Yoruba) were both junior partners. Fon dominated the officer corps. 2. Botswana had no African officers at independence. 3. This is a borderline case that could also be coded as ethnic dominance by Tutsi. Although Harkness mentions the increase in Hutu officers prior to independence, Shabtai (1972) estimates that Tutsi composed 80% of the officer corps and Uvin (1999, 256) states that at the time Tutsi staged a coup in 1966 they "controlled most of the army." 4. DRC had no African officers at independence. Among the PCS groups, Luba Kasai were self-excluded, Lunda Yeke were powerless, and Luba Shaba were junior partner with regional autonomy. 5. Harkness notes that Amhara constituted a "disproportionate percentage" of the officer corps, implying this case could also be coded as PCS dominance of civilian and military positions. 6. Among Guinea's PCS groups, Malinke were senior partner and Peul were junior partner. 7. Among Senegal's PCS groups, Serer were the senior partner and and Pulaar and Wolof were both junior partners. 8. Among Sudan's PCS groups, riverine Arabs dominated the government and officer corps, and Fur were powerless. 9. Among Uganda's PCS groups, Baganda were a senior partner and South-Westerners were a junior partner. Although Harkness (2018) stresses the influence of Baganda in the officer corps, Horowitz (1985) and Shabtai (1972) emphasize the overrepresentation of northern groups. Another aspect of Uganda that makes it an ambiguous split domination case was that the Buganda Kabaka (king) was the president and a northerner was the prime minister (EPR codes both as senior partners at independent), so there was no dominance within civilian political positions, either. 10. Zambia had no African officers at independence. Among the PCS groups, Bemba speakers were a senior partner and Lozi were a junior partner with regional autonomy.

One caveat to this counterargument for the split domination mechanism is that, as Harkness (2018) describes, gathering detailed information on the ethnic composition of militaries in the late decolonization period is extremely difficult. In some cases, such as Uganda, Horowitz (1985) characterizes domination by northern officers (see also Shabtai (1972)) whereas Harkness' examination of colonial records shows significant presence of Baganda officers as well. A possible reason for discrepancy is that, in many cases, martial race-inspired recruitment patterns that created highly skewed militaries during much of the colonial period lessened closer to independence. Militaries became more balanced as "advanced" groups (such as

[128] Ghana's military also exhibited ethnic imbalance, although a PCS group did not dominate either the presidency or the military. Kwame Nkrumah was a Nzema (a subset of the EPR group Other Akans) whereas various southern ethnic groups dominated the military: Ewe, Ga, and Fanti (also a subset of Other Akans). This case does not clearly qualify as a split domination regime, however, because no single ethnic group dominated the military and there was some overlap between the presidency and top generals (in terms of the broader grouping of Akans).

the Baganda) entered the officer corps amid Africanization because of their higher educational achievement. Although Harkness sources her evidence more clearly than does Horowitz, unavoidable measurement errors qualifies any conclusions about ethnic military composition.

The second inconsistent pattern from Table B.2 for split domination arguments is that the cases in which one ethnic group dominated both top civilian and top military positions (Angola, Mali, Sudan, Chad, Rwanda) did not avoid the destructive consequences of pre-colonial statehood. All five countries experienced a rebellion by an out-of-power group, and Chad, Rwanda, and Sudan all featured intra-ethnic coups plausibly propelled by dissatisfaction with how leaders managed the threat from excluded groups (Section 6.1 provides additional details). Therefore, even if I recoded certain cases that Harkness (2018) codes as non-split domination (such as Uganda), patterns in countries with ethnic dominance highlight that many PCS countries that, unambiguously, were not split domination regimes still experienced considerable violence.

# C Supporting Information for Section 3

Appendix A provides details on coding the pre-colonial state measure. The end of the appendix contains the full citations for all references in this section.

## C.1 Sample

The civil war sample contains almost all ethnic group-years from the Ethnic Power Relations (EPR; Vogt et al. 2015) dataset for Sub-Saharan African countries from their year of independence until 2013. The 37 countries include Angola, Benin, Botswana, Burundi, Cameroon, Central African Republic, Chad, Congo (Democratic Republic), Congo (Republic), Cote d'Ivoire, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Togo, Uganda, Zambia, and Zimbabwe. Because the hypotheses about ethnic violence only pertain to post-European colonial polities, the sample excludes foreign settler-dominated South Africa before 1994, Liberia before 1980, and Zimbabwe before 1980—therefore only focusing on years in which indigenous Africans held power. Non-colonized Ethiopia's first year in the dataset is 1956, the first year in which a colonized country in the dataset (Sudan) gained independence.

The 2014 (Update 2) version of EPR does not provide data for Burkina Faso, Cape Verde, Comoros, Equatorial Guinea, Lesotho, Sao Tome and Principe, Seychelles, Somalia, or Swaziland because they do not judge ethnicity to be politically relevant. Data limitations aside, excluding most of these countries from the analysis is justified because almost all do not meet either of two theoretical scope conditions. First, many islands lacked an indigenous population prior to colonization, eliminating the possibility of pre-colonial states (which is also why the sample does not include Mauritius). Second, three of the mainland countries effectively have only one ethnic group, which obviates the theory's focus on pre-colonial statehood creating politicized ethnic differences in countries with multiple ethnic groups. The theory does not offer clear predictions for countries with only one ethnic group because the key considerations about country-level spillover effects to raise conflict propensity for all groups in PCS countries, and incentives to exclude from the center along ethnic lines do not arise. Even the discussion of intra-ethnic coups is premised on disruptions created by competition among multiple ethnic groups. The sample also excludes Tanzania for this reason: EPR codes "Mainland Africans" as over 96% of the country's population, hence effectively one

ethnic group. Notably, earlier versions of EPR did not include Tanzania and Mauritius, which is also why Roessler's (2011) dataset excludes them.

## C.2 Civil War Data

The main civil war variable matches EPR ethnic groups to major civil wars from Fearon and Laitin's (2003) dataset. Their civil war list provides a careful coding scheme for distinguishing civil wars. By contrast, the main alternative in the literature is to use the ACD2EPR dataset (Vogt et al., 2015), which uses a lower death threshold and distinguishes civil war episodes by using a fighting lapse rule. Procedures based entirely on lapse rules tend to overcount onsets. However, a robustness check (Table D.3) shows similar results when using ACD2EPR data. Additionally, the main tables also evaluate Roessler's (2011) ethnic participation civil war onset variable (updated through 2013 by Roessler and Ohls 2018), as Section 3.3 describes.

***Present measure: major ethnic civil war onset.*** The main civil war data used for this article draw from Fearon and Laitin's (2003) updated civil war data through 2009, which I further update through 2013 by adding new conflicts from the Correlates of War database (Dixon and Sarkees, 2015), which also uses a 1,000 death threshold. I assigned wars to EPR ethnic groups using the following procedure. First, I matched each Fearon and Laitin (2003) conflict and each post-2009 conflict to the corresponding conflict in the UCDP/PRIO Armed Conflict Database (ACD; Gleditsch et al. 2002). Because Fearon and Laitin use a higher death threshold than the 25 battle deaths per year needed to be included in the ACD, the ACD contains almost all their civil wars. This facilitated using the ACD2EPR dataset (Vogt et al., 2015), which links rebel groups in the ACD to EPR groups and codes whether the rebel group made ethnic claims and recruited within an ethnic group. Ethnic claims and recruitment are individually necessary and jointly sufficient conditions for ACD2EPR to code the ethnic group as involved in an "ethnic" conflict, and I use this same definition to code an ethnic war. By contrast, in every regression table in this article that uses ethnic groups as the unit of analysis, the dependent variable codes as 0 (i.e., not an ethnic war) any civil war that lacked ethnic aims and recruitment. For Fearon and Laitin wars not included in the Armed Conflict Dataset, the author used Fearon and Laitin's coding of whether or not it was an ethnic civil war and consulted secondary sources to code ethnic participation.

In Fearon and Laitin conflicts with only a single corresponding rebel group and ethnic group in ACD2EPR, I coded that ethnic group as participating in a civil war during the years coded by Fearon and Laitin. Assigning Fearon and Laitin civil wars to EPR ethnic groups for conflicts involving multiple rebel groups and/or multiple ethnic groups required additional considerations. In most cases with multiple ethnic groups participating in the same conflict, I used the PRIO Battle Deaths dataset (Lacina and Gleditsch, 2005) to assess whether that ethnic group was responsible for at least 1,000 battle deaths. This was not possible, however, for center-seeking conflicts featuring multiple ethnic groups because the ACD and the PRIO Battle Deaths dataset code all rebel groups participating in a center-seeking civil war as part of the same conflict. (By contrast, in countries with multiple separatist civil wars, such as Ethiopia, the dataset provide battle death estimates for each distinct territorial conflict.) For these center-seeking conflicts, I coded any participating EPR group (drawing from ACD2EPR) with ethnic claims and recruitment as experiencing an ethnic civil war. I use ACD2EPR's conflict years for the group rather than Fearon and Laitin's because, in some conflicts featuring multiple ethnic groups, individual ethnic groups only participated in a subset of the years of the overall conflict.

***Advantages relative to existing ethnic group civil war measures.*** The ACD and ACD2EPR datasets offer innumerable contributions to the civil war literature, but using their data to code civil war onset entails two coding decisions that too often go unquestioned. First, although ACD distinguishes between years

with "minor" (at least 25 battle deaths) and "major" (at least 1,000 battle deaths) conflicts, ACD2EPR only includes information on 25 battle deaths. A central puzzle in studies of war concerns their heavy costs in terms of human lives and forgone economic production, which corresponds more closely with at least 1,000 battle deaths than with 25 battle deaths. Therefore, one would need to re-merge ACD and EPR to calculate 1,000 battle deaths at the ethnic group level, which would entail a similar process as described above to discern which groups caused 1,000 battle deaths as opposed to only 25. For example, as described above, in center-seeking conflicts with multiple rebel and ethnic groups, neither ACD nor its associated battle deaths dataset distinguishes for how many deaths each group is responsible.

Second, ACD and ACD2EPR provide information on whether or not certain battle death thresholds were met in a particular year, but no information about other context regarding the war. Therefore, unlike Fearon and Laitin's (2003) list, ACD does not provide a coherent scheme for coding distinct civil wars. To translate their data into civil war onset data, scholars are forced to rely solely on lapse years, often using a two-year lapse rule. If the battle death threshold is not met for at least two years after being met in the past, then using a two-year lapse rule counts any future year that meets the death threshold as a new civil war. Problematically, this procedure often either undercounts or (more likely) overcounts civil war onsets, especially when applied to the 25 battle death threshold standard in EPR studies. Fearon and Laitin (2013, 25) summarize:

> "They apply a criterion of one year (or two, or ten, for different codings) with no conflict above their 25 death threshold. This has the advantage of being relatively definite, but the disadvantage of making many long-running, low level conflicts that flit above and below the 25 dead threshold look like many distinct civil wars. In our view they often are more naturally seen as a single, long-running but low level civil conflict, that happens often by chance to get above or below the threshold in some years" (25). (Also see Sambanis 2004, 818-9.)

For an example of overcounting, using the standard two-year lapse coding in ACD2EPR, the Bakongo in Angola fought four different civil wars in the 1990s and 2000s even though the same rebel group was operative during the entire period. Solely using a lapse rule to distinguish conflicts can also undercount civil war onsets. For example, the UCDP Conflict Encyclopedia describes civil wars in the Democratic Republic of the Congo in the 1990s: "In 1996-1997 an armed rebellion led by AFDL and supported by Rwanda and Uganda managed to topple President Mobutu in May 1997. However the new regime was soon at war again [in 1998], this time against RCD and MLC." Although two different sets of governments and rebel groups fought what by any reasonable conceptualization are two distinct wars, the two-year lapse rule does not count a new onset in 1998 for the Tutsi-Banyamulenge because they participated in conflict in the previous year.

Although scholars can also employ lapse rules of other length, coding civil war episodes solely by using lapse rules does not address these problems of undercounting and overcounting. Two of Fearon and Laitin's (2003) coding rules help to guard against these issues. First, "War ends are coded by observation of a victory, wholesale demobilization, truce, or peace agreement followed by at least two years of peace" (Fearon and Laitin 2003, 76, fn. 4; which also states their full set of rules). This directly addresses the concern about overcounting onsets for periodic conflicts, such as Bakongo in Angola, because clear signals of intent to end the current episode of fighting characterize the end of a war. Importantly, this rule still enables coding repeated civil wars with the same rebel group. Second, "If a main party to the conflict drops out, we code a new war start if the fighting continues (e.g., Somalia gets a new civil war after Siad Barre is defeated in 1991)." This addresses the problem of undercounting onsets in cases such as the Democratic Republic of the Congo in the 1990s.

Although in principle scholars could recode ACD into distinct episodes, in practice, applying this coding procedure is particularly difficult at the ethnic group level. From examining ACD2EPR data, there are fre-

quent gaps in fighting for individual ethnic groups. To measure distinct conflict episodes, it is more sensible to start with a list like Fearon and Laitin's that distinguishes civil wars, and then to code ethnic affiliation—rather than starting with ACD2EPR and trying to classify fighting years into unique civil wars.

### C.3 Coup Data

The ethnic-level coup measures draw from Roessler (2011), which Roessler and Ohls (2018) updated through 2013. Roessler coded the ethnic identity of coup participants from McGowan's (2003) database through 2013. "A coup d'état involves the sudden, often violent overthrow of an existing government by a small group . . . Thus, a coup is a change in power from the top that always results in the abrupt replacement of leading government personnel" (McGowan, 2003, 342).

The theoretical logic applies equally to successful coups and coup attempts because the prediction that PCS groups should more frequently have access to power should also better-enable them to succeed at coup attempts (also see Section B.4.4). However, although the regression tables examine both successful coups and coup attempts, the successful coup data are somewhat more reliable, which is perhaps why almost all of Roessler's (2011) and Roessler and Ohls's (2018) coup regressions only analyze successful coup attempts. This relates to concrete data limitations—Roessler's (2011) dataset identifies the ethnicity of participants in every successful coup but this information is missing for 9% of failed coups—and to inherent limitations to measuring failed coups (Kebschull, 1994). Many failed coups will not produce sufficient evidence to know that they occurred, or, given verification difficulties, the ruler might make up a plot as an excuse to purge dissidents. Supporting this contention, successful coup cases exhibit considerably higher consistency across datasets than do failed coups. For example, I calculated that 91% of Roessler's successful coup attempts also appear in Powell's (2012*a*) coup dataset, compared to 69% for failed coups.

## C.4 Alternative Explanations

**Table C.1: Description and Sources for Covariates**

| Covariate | Description |
|---|---|
| Ecological diversity | Fenske (2014) provides evidence that states were more likely to arise in areas with higher ecological diversity because they could more easily trade across ecological regions. I calculated ecological diversity for each EPR ethnic group by using Fenske's spatial vegetation data, which is derived from White (1983). The measure is standard deviation of the area of vegetation types (of which there are 18) within an EPR ethnic group's location polygon. |
| Historical warfare | Besley and Reynal-Querol (2014) and Dincecco, Fenske and Onorato (2016) demonstrate a strong positive relationship between historical and modern wars in Africa. The variable scores a 1 if at least one war between 1400 and 1700 occurred within the group's EPR polygon, and 0 otherwise. Calculated by author by merging Besley and Reynal-Querol's (2014) coordinates for warfare location with GeoEPR spatial data. |
| Slave exports | Although slave wars destroyed historical states such as the Kongo state (Nunn, 2008, 143), states able to monopolize trade routes benefited greatly (Lloyd, 1965, 70) and states such as the Asante declined after West African slave exports decreased (Hopkins, 2000, 314-8). I use Nunn's (2008) country-level variable that divides number of slave exports by land area to account for this. For the present purposes, the country-level data has two advantages over more disaggregated slave export data. First, pre-colonial statehood is argued to cause violence through country-wide spillover effects, making country-level variables relevant even in regressions that use ethnic groups as the unit of analysis. Second, if slave exports impact subsequent political violence, it should be because neighboring groups raided each other, which is better captured by country-level measures rather than by measuring the number of slaves exported from each ethnic group (which is not available, anyway, for EPR ethnic group units). Data point for Eritrea is imputed using Ethiopia's data. |
| Tsetse fly | Alsan (2015, 395) shows that groups residing in territory with greater tsetse fly prevalence tended to have lower levels of political centralization by decreasing population density and by eliminating the possibility of using pack animals to move armies and to conduct long-distance trade. Calculated by author using Alsan's spatial data to calculate the average value on her tsetse fly sustainability index for EPR ethnic group polygons. |
| Neolithic transition | Putterman (2008) shows in a global sample that territories experiencing earlier transitions to agricultural production tended to experience higher levels of statehood in the second millennium, a variable measured at the country level. The measure is thousands of years elapsed since an ethnic group's (modern-day) country experienced a transition to agricultural production. Data imputed for Djibouti (average of Ethiopia and Somalia) and Eritrea (Ethiopia). |
| GDP per capita | Annual logged country-level data from Maddison (2008). Data for Eritrea imputed from Ethiopia. |
| Population | Annual logged country-level data from Maddison (2008). Because he provides a joint data point for Ethiopia and Eritrea, for these two countries I multiply his estimates in all years by each country's percentage of their joint population in 2017. |
| Democracy | Annual country-level data from Polity IV's *polity2* variable (Marshall and Gurr, 2014). |
| Herbst geography | Herbst (2000) classifies the difficulty of broadcasting power in different African countries as a proxy for the geographic difficulty of preventing civil war. Herbst classifies countries as easy (0), neutral (1), hinterland (2), and difficult geography (3), which I turned into an ordinal variable using the values in parentheses. He is missing data for Djibouti and Madagascar, which I coded. |
| Population % | Ethnic group's share of the population, coded by EPR (Vogt et al., 2015). |
| Distance from capital | Distance between centroid of ethnic group's EPR polygon and the country's capital. Calculated by author by combining GeoEPR spatial data with CShapes data (Weidmann, Kuse and Gleditsch, 2010). |
| Giant oil field | Ethnic group coded as 1 if it has at least one giant oil field within its EPR polygon, or within 250 kilometers offshore and within the group's country's maritime borders. Giant oil field data from Horn (2003). |

## C.5 Summary Statistics

**Table C.2: Summary Statistics for Main Sample**

| Variable | Mean | Std. Dev. | Group-years |
|---|---|---|---|
| Major ethnic civil war onset | 0.007 | 0.082 | 8102 |
| Major civil war onset (ethnic participation) | 0.009 | 0.093 | 8108 |
| Successful coup | 0.009 | 0.096 | 8567 |
| Coup attempt | 0.019 | 0.151 | 8567 |
| Ethnopolitical inclusion | 0.58 | 0.494 | 8567 |
| PCS group | 0.163 | 0.369 | 8567 |
| SLPCS group | 0.447 | 0.497 | 8567 |
| SL group | 0.39 | 0.488 | 8567 |
| Ecological diversity | 0.396 | 0.224 | 8567 |
| Historical warfare | 0.119 | 0.324 | 8567 |
| Slave exports | 4.912 | 2.935 | 8567 |
| Tsetse fly | 0.445 | 0.141 | 8567 |
| Neolithic transition | 3.027 | 1.017 | 8567 |
| ln(GDP/capita) | 7.349 | 0.812 | 8567 |
| ln(Population) | 15.962 | 1.261 | 8567 |
| Democracy | -2.022 | 6.021 | 8567 |
| Herbst geography | 1.468 | 1.247 | 8567 |
| Group % of pop. | 0.167 | 0.172 | 8567 |
| Distance from capital | 3.913 | 3.174 | 8567 |
| Giant oil field | 0.055 | 0.228 | 8567 |

*Notes*: Each covariate has full data coverage for every ethnic group-year in the sample described above. The civil war onset variables have fewer observations because, following McGrath (2015), I set years with an ongoing civil war to missing.

## Table C.3: Summary Statistics for Ethnically Excluded Group-Years

| Variable | Mean | Std. Dev. | Group-years |
|---|---|---|---|
| Major ethnic civil war onset | 0.015 | 0.123 | 3196 |
| Major civil war onset (ethnic participation) | 0.018 | 0.135 | 3196 |
| Successful coup | 0.004 | 0.064 | 3598 |
| Coup attempt | 0.013 | 0.115 | 3598 |
| PCS group | 0.094 | 0.291 | 3598 |
| SLPCS group | 0.631 | 0.483 | 3598 |
| SL group | 0.275 | 0.447 | 3598 |
| Ecological diversity | 0.441 | 0.213 | 3598 |
| Historical warfare | 0.087 | 0.281 | 3598 |
| Slave exports | 4.788 | 3.057 | 3598 |
| Tsetse fly | 0.451 | 0.134 | 3598 |
| Neolithic transition | 3.237 | 1.23 | 3598 |
| ln(GDP/capita) | 7.209 | 0.779 | 3598 |
| ln(Population) | 16.187 | 1.301 | 3598 |
| Democracy | -2.87 | 5.741 | 3598 |
| Herbst geography | 1.882 | 1.295 | 3598 |
| Group % of pop. | 0.115 | 0.157 | 3598 |
| Distance from capital | 5.202 | 3.358 | 3598 |
| Giant oil field | 0.08 | 0.271 | 3598 |

*Notes*: See note for Table C.2.

## Table C.4: Summary Statistics for Ethnically Included Group-Years

| Variable | Mean | Std. Dev. | Group-years |
|---|---|---|---|
| Major ethnic civil war onset | 0.001 | 0.035 | 4906 |
| Major civil war onset (ethnic participation) | 0.002 | 0.047 | 4912 |
| Successful coup | 0.013 | 0.113 | 4969 |
| Coup attempt | 0.024 | 0.173 | 4969 |
| PCS group | 0.213 | 0.409 | 4969 |
| SLPCS group | 0.314 | 0.464 | 4969 |
| SL group | 0.473 | 0.499 | 4969 |
| Ecological diversity | 0.364 | 0.226 | 4969 |
| Historical warfare | 0.142 | 0.349 | 4969 |
| Slave exports | 5.001 | 2.841 | 4969 |
| Tsetse fly | 0.44 | 0.146 | 4969 |
| Neolithic transition | 2.875 | 0.794 | 4969 |
| ln(GDP/capita) | 7.45 | 0.821 | 4969 |
| ln(Population) | 15.799 | 1.206 | 4969 |
| Democracy | -1.408 | 6.144 | 4969 |
| Herbst geography | 1.168 | 1.119 | 4969 |
| Group % of pop. | 0.205 | 0.173 | 4969 |
| Distance from capital | 2.979 | 2.67 | 4969 |
| Giant oil field | 0.037 | 0.188 | 4969 |

*Notes*: See note for Table C.2.

## Table C.5: Summary Statistics for Cross-Section

| Variable | Mean | Std. Dev. | Ethnic groups |
|---|---|---|---|
| Major ethnic civil war onset, total | 0.266 | 0.583 | 169 |
| Major ethnic civil war onset, binary | 0.207 | 0.406 | 169 |
| Major civil war onset (ethnic participation), total | 0.325 | 0.651 | 169 |
| Major civil war onset (ethnic participation), binary | 0.237 | 0.426 | 169 |
| Successful coup, total | 0.432 | 0.937 | 169 |
| Successful coup, binary | 0.237 | 0.426 | 169 |
| Coup attempt, total | 0.882 | 1.828 | 169 |
| Coup attempt, binary | 0.343 | 0.476 | 169 |
| % years w/ ethnopolitical inclusion | 0.524 | 0.407 | 169 |
| PCS group | 0.166 | 0.373 | 169 |
| SLPCS group | 0.414 | 0.494 | 169 |
| SL group | 0.42 | 0.495 | 169 |
| Ecological diversity | 0.401 | 0.23 | 169 |
| Historical warfare | 0.118 | 0.324 | 169 |
| Slave exports | 4.533 | 3.259 | 169 |
| Tsetse fly | 0.43 | 0.148 | 169 |
| Neolithic transition | 2.865 | 1.085 | 169 |
| ln(GDP/capita) | 7.252 | 0.867 | 169 |
| ln(Population) | 15.259 | 1.253 | 169 |
| Democracy | -0.207 | 6.639 | 169 |
| Herbst geography | 1.391 | 1.278 | 169 |
| Group % of pop. | 0.178 | 0.18 | 169 |
| Distance from capital | 3.72 | 3.042 | 169 |
| Giant oil field | 0.036 | 0.186 | 169 |

*Notes*: The cross-sectional sample contains all politically relevant ethnic groups in the first year each country enters the sample (for most countries, this is the year of independence).

# D Supporting Information for Sections 4 and 5

The end of the appendix contains full citations for all references in this section.

## D.1 Additional Robustness Checks

### D.1.1 Jackknife Sample Sensitivity Analysis

Numerous additional robustness checks demonstrate mostly similar findings as Tables 2 and 3. I assessed sample sensitivity through a jackknife-type procedure: re-running every specification in Tables 2 and 3 while iteratively dropping all ethnic group-years by country (4 specifications $\times$ 37 countries = 148 total regressions for each dependent variable). Table D.1 summarizes the results from this analysis for the four coefficient estimates/outcome combinations that correspond to the two main hypotheses, reporting the number of regressions in which the coefficient estimate is statistically significant at the stated level. Regarding H1, the SLPCS coefficient is highly robust in the civil war regressions: statistically significant at 1% in almost every jackknife iteration, and significant at 5% for all. Regarding H2, the PCS coefficient is mostly robust in the successful coup specifications, but somewhat more sensitive in the coup attempt specifications. Ninety-five percent of the successful coup results are statistically significant at 5%, and only in one specification does the coefficient estimate for PCS rise above the 10% threshold (p-value=0.103 when dropping Kenya from Column 2 of Table 3). Although overall supporting H2, the coefficient estimate for PCS exceeds 10% in 10 of the 148 specifications for coup attempts: two for Kenya, two for Burundi, and one each for Benin, Cameroon, Eritrea, Malawi, Mozambique, and Sudan. Section C.3 discusses concerns about measurement error for coup attempts, which may contribute to the less robust findings.

**Table D.1: Summary of Jackknife Sample Sensitivity Analysis**

| | Significant at 1% | Significant at 5% | Significant at 10% |
|---|---|---|---|
| **H1: SLPCS, ethnic civil war** | 145 (98%) | 148 (100%) | 148 (100%) |
| **H1: SLPCS, civil war participation** | 146 (99%) | 148 (100%) | 148 (100%) |
| **H2: PCS, successful coup** | 32 (22%) | 140 (95%) | 147 (99%) |
| **H2: PCS, coup attempt** | 5 (3%) | 86 (58%) | 138 (93%) |

### D.1.2 Assessing Selection on Unobservables Using Selection on Observables

The theoretically relevant coefficient estimates are stable in magnitude across the various specifications. Altonji, Elder and Taber (2005) present a commonly used metric that formally uses this information to learn about how large the bias from unobserved covariates would need to be for the true coefficient to be 0, calculated by comparing coefficient estimates in models with covariates to coefficient estimates from a restricted specification. In Tables 2 and 3, this requires comparing Columns 2, 3, and 4 (covariate specifications) to Column 1 (restricted specification), and Columns 6, 7, and 8 (covariate specifications) to Column 5 (restricted specification). I follow standard practice in the literature by performing the calculations on linear models, reported in Table D.9.[129]

Table D.2 summarizes these calculations for all 12 theoretically relevant coefficient estimates from specifications with covariates in Tables 2 and 3, i.e., SLPCS coefficient estimate in civil war regressions (H1) or

[129] Altonji, Elder and Taber (2005) present an econometric derivation, and Nunn and Wantchekon (2011, 3237-8) provide an applied discussion.

PCS coefficient estimate in coup regressions (H2). Negative numbers in Table D.2 imply that the coefficient estimate in the specification with covariates exceeds in magnitude the coefficient estimate in the restricted specification. This indicates an estimate highly robust to omitted covariates because the magnitude of the bias of unobserved covariates would need to go in the opposite direction as the bias from omitting observables to drive the coefficient estimate to 0. This occurs for six of the 12 coefficient estimates in Table D.2.

In the other six specifications, adding covariates diminishes the magnitude of the theoretically relevant coefficient estimate, but the large positive numbers in Table D.2 show that adding covariates only minimally affects the coefficient estimates: the bias from unobservables would need to be between 10 and 64 times larger than the bias from omitting the covariates contained in these specifications to overturn the positive coefficient estimate. Altonji, Elder and Taber (2005) calculate a corresponding figure of 3.55 for their own analysis, which they interpret as large in magnitude.

Overall, the insensitivity of the coefficient estimates to adding covariates implies that—although it is impossible to control for every possible confounder—if the control variables included the tables are substantively relevant, then there is less reason to believe that covariates not included in any of the specifications would overturn the results.

**Table D.2: Assessing Bias from Unobservables using Selection on Observables**

| Set of covariates: | PCS origins covariates (Column 2 or 6) | Standard conflict covariates (Column 3 or 7) | All covariates (Column 4 or 8) |
|---|---|---|---|
| SLPCS with ethnic civil war | -8.4 | 10 | -34.6 |
| SLPCS with civil war participation | -14.3 | 19 | 26 |
| PCS with successful coup | -119.6 | 26.8 | -16.2 |
| PCS with coup attempt | 63.7 | 15.9 | -21.6 |

### D.1.3 Alternative Measures

Tables D.3 through D.5 evaluate alternative measures. Panel A of Table D.3 uses the standard civil war measure in EPR studies from the ACD2EPR dataset (Vogt et al., 2015) with a threshold of 25 battle deaths per year and a two-year lapse rule for coding new conflicts. Panel B uses an alternative measure of power struggles at the center, irregular inter-ethnic regime changes. I coded this variable using Roessler's (2011) appendix, which lists all changes in the ethnic identity of a country's ruling group as well as whether the change was irregular (coup, purge, or successful rebellion) rather than via an election. Although the theory discusses why intra-ethnic coups are consistent with the framework, this robustness check demonstrates that intra-ethnic shuffling does not drive the findings. Unreported results show that the statistically significant PCS coefficients arise from cases in which the group *gained* power, whereas the two statistically significant SLPCS coefficients arise from cases in which the group *lost* power (the measure in Panel B of Table D.3 codes either event as a 1). These regressions only use data through 2005, when Roessler's (2011) sample ends. The next two tables use the same dependent variables as in the main tables but use alternative coding rules for the PCS indicators, counting as stateless groups with multiple states (Table D.4) or groups that experienced early major colonial interference (Table D.5). Section 3.2 details both measures.

## Table D.3: Alternative Dependent Variables

| | Panel A. DV: Ethnic civil war onset (ACD w/ 25 b.d.s) | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| PCS group | 0.348 | 0.364 | 0.147 | 0.360 |
| | (0.543) | (0.558) | (0.548) | (0.571) |
| SLPCS group | 1.574*** | 1.591*** | 1.225*** | 1.375*** |
| | (0.403) | (0.388) | (0.416) | (0.446) |
| Group-years | 7,990 | 7,990 | 7,990 | 7,990 |
| PCS origins covariates? | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES |
| | Panel B. DV: Irregular ethnic ruling group change | | | |
| | (1) | (2) | (3) | (4) |
| PCS group | 0.729** | 0.722* | 0.723** | 0.753** |
| | (0.315) | (0.371) | (0.291) | (0.362) |
| SLPCS group | 0.306 | 0.320 | 0.715*** | 0.843*** |
| | (0.312) | (0.312) | (0.270) | (0.278) |
| Group-years | 7,094 | 7,094 | 7,094 | 7,094 |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES |

*Notes*: The set of specifications in Table D.3 are identical to those in Columns 1 through 4 of Table 2 except Panel A changes the dependent variable to ACD2EPR civil war onset and Panel B changes the dependent variable to irregular ethnic ruling group change. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

## Table D.4: Alternative PCS Measure #1: Recode Groups with Multiple States

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group (alt. #1) | 1.066** | 0.906 | 1.139** | 0.990 | 1.070*** | 0.956** | 1.371*** | 1.117** |
| | (0.492) | (0.570) | (0.573) | (0.688) | (0.400) | (0.444) | (0.492) | (0.517) |
| SLPCS group (alt. #1) | 1.578*** | 1.402*** | 1.576*** | 1.453*** | 1.361*** | 1.232*** | 1.610*** | 1.449*** |
| | (0.387) | (0.402) | (0.424) | (0.512) | (0.315) | (0.321) | (0.408) | (0.422) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group (alt. #1) | 1.227*** | 1.213*** | 1.151*** | 1.426*** | 0.984*** | 0.897*** | 0.876*** | 1.031*** |
| | (0.310) | (0.388) | (0.320) | (0.404) | (0.290) | (0.333) | (0.334) | (0.355) |
| SLPCS group (alt. #1) | -0.0832 | -0.211 | 0.0811 | 0.240 | -0.0277 | -0.218 | 0.0804 | 0.134 |
| | (0.358) | (0.413) | (0.410) | (0.437) | (0.257) | (0.305) | (0.291) | (0.309) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Panel A of Table D.4 is identical to Table 2, and Panel B of Table D.4 is identical to Table 3, except Table D.4 replaces the PCS indicators with the first alternative measure (group is non-PCS if organized into multiple states) described in Section 3.2. Table A.2 summarizes the cases. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

**Table D.5: Alternative PCS Measure #2: Recode Groups with Early Major Colonial Interference**

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group (alt. #2) | 0.882* | 0.814 | 0.954* | 0.796 | 1.142*** | 1.146*** | 1.145*** | 0.966** |
| | (0.482) | (0.531) | (0.543) | (0.608) | (0.388) | (0.419) | (0.432) | (0.455) |
| SLPCS group (alt. #2) | 1.383*** | 1.201*** | 1.372*** | 1.143*** | 1.243*** | 1.149*** | 1.132*** | 0.973*** |
| | (0.379) | (0.386) | (0.398) | (0.434) | (0.315) | (0.332) | (0.351) | (0.344) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group (alt. #2) | 1.042*** | 1.045*** | 0.903*** | 1.297*** | 0.742*** | 0.697** | 0.584** | 0.859** |
| | (0.317) | (0.373) | (0.307) | (0.408) | (0.273) | (0.321) | (0.283) | (0.339) |
| SLPCS group (alt. #2) | 0.0105 | -0.148 | 0.143 | 0.323 | 0.111 | -0.136 | 0.206 | 0.240 |
| | (0.365) | (0.399) | (0.392) | (0.434) | (0.299) | (0.294) | (0.324) | (0.314) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Panel A of Table D.5 is identical to Table 2, and Panel B of Table D.5 is identical to Table 3, except Table D.5 replaces the PCS indicators with the second alternative measure (group is non-PCS if experienced early major colonial interference) described in Section 3.2. Table A.2 summarizes the cases. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

### D.1.4 Alternative Statistical Models

Tables D.6 through D.11 replicate Tables 2 and 3 using alternative statistical models: cross-sectional rather than panel data (Appendix Table C.5 provides associated descriptive statistics) using either a count or binary version of the dependent variables, replacing logit with either rare events logit or OLS, adding year fixed effects, and estimating two-way clustered standard errors by country and ethnic group. In each table, Panel A corresponds with Table 2 and Panel B corresponds with Table 3.

**Table D.6: Cross-Sectional Data (Count Outcome Variables)**

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset (count) | | | | DV: Major CW onset, ethnic participation (count) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.194* | 0.191 | 0.129 | 0.234* | 0.380*** | 0.351** | 0.332** | 0.381** |
| | (0.101) | (0.117) | (0.129) | (0.129) | (0.143) | (0.152) | (0.160) | (0.154) |
| SLPCS group | 0.429*** | 0.440*** | 0.371*** | 0.443*** | 0.430*** | 0.426*** | 0.386*** | 0.428*** |
| | (0.0947) | (0.0820) | (0.0942) | (0.0903) | (0.101) | (0.0875) | (0.129) | (0.126) |
| Ethnic groups | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| R-squared | 0.114 | 0.301 | 0.194 | 0.361 | 0.101 | 0.223 | 0.186 | 0.281 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup (count) | | | | DV: Coup attempt (count) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.713** | 0.682** | 0.672** | 0.727** | 1.354** | 1.269** | 1.229** | 1.380** |
| | (0.293) | (0.279) | (0.276) | (0.285) | (0.610) | (0.614) | (0.605) | (0.663) |
| SLPCS group | -0.194 | -0.191 | -0.0668 | -0.0209 | -0.317 | -0.326 | -0.101 | 0.0294 |
| | (0.121) | (0.138) | (0.152) | (0.168) | (0.223) | (0.248) | (0.252) | (0.272) |
| Ethnic groups | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| R-squared | 0.113 | 0.171 | 0.170 | 0.218 | 0.101 | 0.163 | 0.156 | 0.207 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |

*Notes*: The dependent variable in Table D.6 is the count of the number of times that the event occurred for the ethnic group during the sample time frame (for Panel A, this is the number of years with a civil war *onset*, not the total number of years that a civil war occurred). The cross-sectional sample contains all politically relevant ethnic groups in the first year each country enters the sample (for most countries, this is the year of independence). The models are estimated using OLS, although Poisson and negative binomial models (not shown) yield qualitatively identical results. $^{***}p < 0.01$,$^{**}p < 0.05$,$^{*}p < 0.1$.

## Table D.7: Cross-Sectional Data (Binary Outcome Variables)

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset (binary) | | | | DV: Major CW onset, ethnic participation (binary) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 1.519** | 1.806** | 1.527* | 4.862*** | 1.635*** | 1.664*** | 1.642** | 2.362*** |
| | (0.693) | (0.708) | (0.781) | (1.450) | (0.590) | (0.637) | (0.677) | (0.896) |
| SLPCS group | 2.231*** | 2.530*** | 2.260*** | 5.009*** | 1.795*** | 1.862*** | 1.694*** | 2.220*** |
| | (0.574) | (0.535) | (0.661) | (1.430) | (0.496) | (0.495) | (0.595) | (0.798) |
| Ethnic groups | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup (binary) | | | | DV: Coup attempt (binary) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 1.156** | 1.546** | 1.437*** | 2.954*** | 1.171** | 1.335** | 1.195** | 2.170*** |
| | (0.471) | (0.618) | (0.555) | (0.933) | (0.464) | (0.569) | (0.554) | (0.763) |
| SLPCS group | -0.758* | -0.743 | -0.237 | 0.491 | -0.325 | -0.351 | 0.140 | 0.711 |
| | (0.454) | (0.530) | (0.534) | (0.710) | (0.374) | (0.423) | (0.447) | (0.592) |
| Ethnic groups | 169 | 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |

*Notes*: The dependent variable in Table D.7 indicates whether or not the event occurred for the ethnic group at some point during the sample time frame. The cross-sectional sample contains all politically relevant ethnic groups in the first year each country enters the sample (for most countries, this is the year of independence). The models are estimated using logit. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

## Table D.8: Rare Events Logit

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.799 | 0.843 | 0.751 | 0.888 | 0.924** | 0.892* | 1.067** | 0.962** |
| | (0.574) | (0.591) | (0.605) | (0.665) | (0.440) | (0.473) | (0.443) | (0.487) |
| SLPCS group | 1.525*** | 1.559*** | 1.431*** | 1.549*** | 1.199*** | 1.175*** | 1.255*** | 1.183*** |
| | (0.448) | (0.431) | (0.439) | (0.509) | (0.347) | (0.342) | (0.376) | (0.382) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.800*** | 0.842** | 0.708** | 1.014** | 0.646** | 0.632* | 0.528* | 0.770** |
| | (0.310) | (0.395) | (0.302) | (0.406) | (0.281) | (0.332) | (0.292) | (0.344) |
| SLPCS group | -0.471 | -0.481 | -0.261 | -0.0268 | -0.387 | -0.474 | -0.242 | -0.0870 |
| | (0.368) | (0.429) | (0.402) | (0.467) | (0.265) | (0.310) | (0.288) | (0.322) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Table D.8 uses King and Zeng's (2001) rare events logit model in every column. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

## Table D.9: OLS

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.00119 | 0.00228 | 0.00128 | 0.00239 | 0.00480 | 0.00522 | 0.00558 | 0.00508 |
| | (0.00236) | (0.00277) | (0.00276) | (0.00291) | (0.00325) | (0.00377) | (0.00355) | (0.00385) |
| SLPCS group | 0.00791*** | 0.00898*** | 0.00719*** | 0.00815*** | 0.00823*** | 0.00885*** | 0.00781*** | 0.00792*** |
| | (0.00213) | (0.00208) | (0.00217) | (0.00217) | (0.00240) | (0.00231) | (0.00292) | (0.00295) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| R-squared | 0.007 | 0.010 | 0.009 | 0.011 | 0.004 | 0.006 | 0.007 | 0.008 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covars.? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.0120** | 0.0122** | 0.0116** | 0.0128** | 0.0210** | 0.0207** | 0.0198* | 0.0220** |
| | (0.00527) | (0.00501) | (0.00512) | (0.00507) | (0.0103) | (0.0104) | (0.0108) | (0.0110) |
| SLPCS group | -0.00303 | -0.00281 | -9.26e-05 | 0.00104 | -0.00581 | -0.00602 | -0.00151 | 0.000649 |
| | (0.00240) | (0.00271) | (0.00289) | (0.00304) | (0.00398) | (0.00441) | (0.00446) | (0.00451) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| R-squared | 0.007 | 0.009 | 0.010 | 0.011 | 0.014 | 0.017 | 0.018 | 0.019 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covars.? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Table D.9 uses OLS models in every column. $^{***}p < 0.01,^{**}\ p < 0.05,^{*}\ p < 0.1$.

## Table D.10: Year Fixed Effects

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.770 | 0.782 | 0.849 | 0.952 | 0.919** | 0.938** | 1.222*** | 1.174** |
| | (0.584) | (0.609) | (0.633) | (0.688) | (0.434) | (0.456) | (0.451) | (0.502) |
| SLPCS group | 1.609*** | 1.626*** | 1.585*** | 1.711*** | 1.276*** | 1.274*** | 1.471*** | 1.458*** |
| | (0.455) | (0.437) | (0.482) | (0.564) | (0.339) | (0.329) | (0.397) | (0.430) |
| Group-years | 3,257 | 3,257 | 3,257 | 3,257 | 4,793 | 4,793 | 4,793 | 4,793 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.848*** | 0.945** | 0.655** | 1.007*** | 0.689** | 0.711** | 0.526* | 0.817*** |
| | (0.323) | (0.398) | (0.305) | (0.383) | (0.279) | (0.316) | (0.284) | (0.315) |
| SLPCS group | -0.527 | -0.463 | -0.437 | -0.190 | -0.372 | -0.396 | -0.280 | -0.0898 |
| | (0.375) | (0.431) | (0.397) | (0.448) | (0.267) | (0.297) | (0.284) | (0.302) |
| Group-years | 5,353 | 5,353 | 5,353 | 5,353 | 7,111 | 7,111 | 7,111 | 7,111 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Every column in Table D.10 contains year fixed effects. $^{***}p < 0.01,^{**}\ p < 0.05,^{*}\ p < 0.1$.

**Table D.11: Two-Way Clustered Standard Errors**

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.814 | 0.865 | 0.782 | 0.942 | 0.929 | 0.899 | 1.086* | 0.991 |
| | (0.673) | (0.677) | (0.713) | (0.811) | (0.617) | (0.585) | (0.625) | (0.615) |
| SLPCS group | 1.588** | 1.621*** | 1.508*** | 1.652*** | 1.230** | 1.204** | 1.297** | 1.238** |
| | (0.637) | (0.539) | (0.557) | (0.622) | (0.530) | (0.499) | (0.555) | (0.544) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.802** | 0.845** | 0.714* | 1.026** | 0.646** | 0.632* | 0.529 | 0.773** |
| | (0.355) | (0.414) | (0.371) | (0.440) | (0.309) | (0.323) | (0.343) | (0.372) |
| SLPCS group | -0.481 | -0.502 | -0.270 | -0.0402 | -0.390 | -0.485 | -0.246 | -0.0945 |
| | (0.469) | (0.516) | (0.484) | (0.491) | (0.358) | (0.405) | (0.373) | (0.366) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Every model in Table D.11 estimates the standard errors using two-way clustering by ethnic groups and countries, using Cameron and Miller's (2015) method for calculating multiple clusters. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

## D.2 Partitioned Ethnic Groups

Many scholars have touted the artificiality of Africa's borders (Michalopoulos and Papaioannou, 2016), which have contributed to civil war and other adverse outcomes either by "dismembering" ethnic groups across international boundaries or by "suffocating" incompatible ethnic groups into the same country (Englebert, Tarango and Carter, 2002). However, artificial does not mean random, and there is considerable evidence that groups' statehood influenced the colonial border drawing process (Englebert et al. 2002, 1096-7 provide several examples). One possible confounding concern that relates to dismemberment is that perhaps more belligerent non-PCS groups were placed into PCS countries, maybe because colonizers were more likely to partition these groups across international boundaries.[130]

This section accounts for "dismemberment" by showing suggestive evidence that groups in PCS countries participated more frequently in ethnic civil wars when adding transnational ethnic group fixed effects to the regression specifications, although these findings are somewhat less conclusive than the main findings due to low statistical power.[131] Specifically, one test to account for possible endogeneity problems stemming from non-randomly assigned international borders is to compare groups partitioned across international boundaries in their civil war propensity. Table D.12 lists every partitioned ethnic group that has initiated an ethnic civil war, showing that 19 of the 24 wars within this sample occurred in PCS countries. Through the fall of the Berlin Wall in 1989, the figure is 12 of 13. Table D.13 runs logit regressions that either truncate the sample to only partitioned groups (Column 1), or include transnational group fixed effects (Column 2), which yields estimates generated solely by comparing members of the same ethnic group to each other across international borders. These are low-powered tests because there are only 32 groups in the Column 2 sample and only 20 during the Cold War era (the fixed effects in logit models drop all transnational ethnic groupings in which no civil war occurs). The specifications do not disaggregate PCS and SLPCS groups because of the already-truncated sample.[132]

The coefficient estimate for PCS countries is statistically significant in the specifications during the Cold War era (Section D.3 discusses the theoretical relevance of this sample), but not in years farther from independence (also see Table D.15). Overall, this provides suggestive evidence of the importance of PCS groups even when changing how the counterfactuals are estimated, although the relative scarcity of partitioned pairs/groups in which a civil war occurred makes the statistical tests somewhat difficult to interpret due to low statistical power.

[130] Even if true, however, this would not explain away the correlations for PCS groups. Other factors related to endogenous border formation include constructing the borders to maximize PCS groups' population share (perhaps in part by not partitioning them across international boundaries) and placing the capital closer to PCS groups, but Tables 2 and 3 contain specifications that control for group population share and distance from the capital.

[131] Every result in this article relates to "suffocation" because of the posited impediments between PCS groups and other ethnic groups in their country to achieving peaceful power-sharing agreements.

[132] Although H1 only directly applies to SLPCS groups, the theoretical logic is consistent with the idea that PCS groups should also exhibit elevated civil war propensity, for which some of the regression estimates provide evidence. This also explains why I do not analyze coups for partitioned groups, given the theoretical rationale and findings that PCS and SLPCS exhibit opposing coup behavior relative to SL groups.

## Table D.12: List of Partitioned Ethnic Groups with an Ethnic Civil War

| EPR ethnic group | Country | CW onset year | Type of group |
|---|---|---|---|
| Lunda-Yeke | Congo, DRC | 1961 | PCS |
| Tutsi | Rwanda | 1962 | PCS |
| Azande | Sudan | 1963 | SLPCS |
| Toubou | Chad | 1966 | SLPCS |
| Muslim Sahel groups | Chad | 1966 | PCS |
| Hutu | Burundi | 1972 | SLPCS |
| Somali (Ogaden) | Ethiopia | 1976 | SLPCS |
| Ndebele-Kalanga-(Tonga) | Zimbabwe | 1983 | PCS |
| Hutu | Burundi | 1988 | SLPCS |
| Gio | Liberia | 1989 | SL |
| Tuareg | Mali | 1989 | SLPCS |
| Diola | Senegal | 1989 | SLPCS |
| Zaghawa, Bideyat | Chad | 1989 | SLPCS |
| Tutsi | Rwanda | 1990 | PCS |
| Afar | Djibouti | 1991 | SL |
| Bakongo | Angola | 1992 | SLPCS |
| Sara | Chad | 1992 | SLPCS |
| Tutsi-Banyamulenge | Congo, DRC | 1996 | SLPCS |
| Hutu | Rwanda | 1996 | SLPCS |
| Lari/Bakongo | Congo | 1998 | SL |
| Tutsi-Banyamulenge | Congo, DRC | 1998 | SLPCS |
| Ngbaka | Congo, DRC | 1998 | SLPCS |
| Northerners (Mande and Voltaic/Gur) | Cote d'Ivoire | 2002 | SL |
| Southern Mande | Cote d'Ivoire | 2002 | SL |

*Notes*: Table D.12 lists every ethnic group in the sample that (1) has co-ethnic kin in a neighboring country in the sample and (2) has participated in a major ethnic civil war during the sample period.

## Table D.13: Partitioned Ethnic Groups: Regression Analysis

| | DV: Major ethnic CW onset | | DV: Major CW onset (ethnic partic.) | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Group in PCS country | -0.244 | -0.0837 | 0.876 | 1.213 |
| | (0.742) | (0.948) | (0.582) | (0.837) |
| Cold War | -1.004 | -0.727 | -1.076 | -0.444 |
| | (1.404) | (0.887) | (0.929) | (1.139) |
| Group in PCS country*Cold War | 2.053 | 1.985* | 0.790 | 0.398 |
| | (1.258) | (1.079) | (0.997) | (1.166) |
| Group-years | 3,783 | 1,602 | 3,697 | 2,063 |
| Transnational group FE? | NO | YES | NO | YES |
| Temporal dependence controls? | YES | YES | YES | YES |
| | Marginal effect estimates | | | |
| Group in PCS country \| During Cold War | 0.00554* | 0.0185** | 0.00892*** | 0.0188** |
| | (0.00283) | (0.00853) | (0.00337) | (0.00796) |
| Group in PCS country \| After Cold War | -0.000641 | -0.000546 | 0.00848 | 0.0172* |
| | (0.00195) | (0.00627) | (0.00548) | (0.00897) |

*Notes*: Table D.13 summarizes a series of logistic regressions by presenting coefficient estimates for an indicator for any group in a PCS country (leaving SL groups as the basis category), and ethnic group-clustered standard errors in parentheses. The sample resembles that from Table 2 except only ethnic groups that share ethnic kin in a neighboring country in the sample are included. Columns 2 and 4 control for fixed effects for transnational ethnic groups, and therefore drops all sets of transitional ethnic groups that did not experience a civil war. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

## D.3 Subsample Analysis: British Colonialism and Cold War Era

The next two tables show that the results vary across different theoretically subsamples. If the theory is correct, then the estimated conflict effects should be pronounced in British colonies. Indirect colonial rule through PCS groups is a posited persistence mechanism, and Britain most consistently ruled through existing political hierarchies. Supporting this implication, no ethnic civil war or ethnic group participation in war occurred in a non-PCS country that Britain colonized, compared to 14 ethnic groups that have participated in at least one ethnic civil war in PCS countries that Britain colonized. Technically, Equation 1 cannot be estimated with civil war as the dependent variable among the sample of British colonies because controlling for the two PCS indicators induces perfect separation in the models. Panel A of Table D.14 excludes former British colonies and shows that the correlation between SLPCS groups and civil wars remains strong. This indicates that although the theory has greater explanatory power for British colonies, it does not apply solely to British colonies.

Panel B examines successful coups disaggregated by British colonialism. The evidence is mixed. On the one hand, the strong correlation between PCS groups and successful coups among ex-British colonies further supports the theoretical framework because the effects should be pronounced in ex-British colonies.[133] On the other hand, there is no systematic relationship between PCS groups and coups, although the coefficient estimates are still positive (in Column 1, the p-value is 0.104). One speculative possibility for these differences is that Britain frequently encouraged coalition governments at independence, therefore including more groups and providing greater opportunities for coups. This would put more PCS groups in position to attempt coups against groups with whom they could not commit to share power as, for example, in Nigeria (see Section 6).

Disaggregating by time period also provides theoretically relevant insights because earlier years of the post-colonial era should exhibit the largest effect estimates. The theory focuses on historical factors culminating at the end of colonial rule that created incentives for political violence after independence in PCS countries. Additionally, poor economic performance across the region and destabilizing conditions caused by the end of the Cold War—including renewed electoral competition after 1989 and new prospects for political cleavages—could create alternative sources of ethnic tensions in non-PCS countries. Appendix Table D.15 shows that the coefficient estimates for the main civil war and coup specifications are large in magnitude when conditioning on pre-1990 years, whereas there is no evidence that pre-colonial statehood contributes to ethnic violence when examining post-Cold War years. This in part accounts for the discrepancy between the present findings and those in Depetris-Chauvin (2015), who only examines years since 1997.

[133] Indeed, a recent contribution on colonialism and coups only analyzes British colonies (Ray, 2016).

## Table D.14: British Colonial Rule

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.565 | 0.969 | 0.536 | 1.125 | 0.580 | 0.477 | 0.869 | 0.432 |
| | (0.685) | (0.743) | (0.708) | (0.980) | (0.516) | (0.553) | (0.571) | (0.662) |
| SLPCS group | 1.405*** | 1.846*** | 1.405*** | 2.058*** | 1.434*** | 1.436*** | 1.724*** | 1.509*** |
| | (0.495) | (0.514) | (0.509) | (0.787) | (0.381) | (0.403) | (0.459) | (0.579) |
| Group-years | 4,792 | 4,792 | 4,792 | 4,792 | 4,797 | 4,797 | 4,797 | 4,797 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.659* | 0.735 | 0.393 | 0.735 | 0.482 | 0.467 | 0.232 | 0.475 |
| | (0.362) | (0.512) | (0.380) | (0.542) | (0.320) | (0.429) | (0.343) | (0.453) |
| SLPCS group | -0.453 | -0.477 | -0.593 | -0.171 | -0.485 | -0.522 | -0.615 | -0.272 |
| | (0.483) | (0.567) | (0.564) | (0.594) | (0.354) | (0.423) | (0.410) | (0.449) |
| British colony | -0.411 | -0.433 | -0.557 | -0.383 | -0.379 | -0.445 | -0.488 | -0.439 |
| | (0.542) | (0.577) | (0.563) | (0.546) | (0.453) | (0.473) | (0.481) | (0.461) |
| PCS group*British colony | 0.561 | 0.407 | 1.138* | 1.012 | 0.595 | 0.557 | 1.016* | 0.951 |
| | (0.694) | (0.764) | (0.685) | (0.765) | (0.627) | (0.656) | (0.614) | (0.642) |
| SLPCS group*British colony | 0.208 | 0.186 | 1.017 | 0.599 | 0.409 | 0.327 | 1.033 | 0.640 |
| | (0.785) | (0.830) | (0.877) | (0.794) | (0.591) | (0.664) | (0.643) | (0.635) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Marginal effect estimates | | | | | | | |
| PCS group \| British colony=1 | 0.0119* | 0.00933* | 0.0123** | 0.0129** | 0.0180* | 0.0150* | 0.0178* | 0.0185** |
| | (0.00640) | (0.00492) | (0.00546) | (0.00519) | (0.0103) | (0.00774) | (0.00913) | (0.00741) |
| PCS group \| British colony=0 | 0.00699 | 0.00729 | 0.00286 | 0.00436 | 0.00841 | 0.00777 | 0.00306 | 0.00556 |
| | (0.00430) | (0.00539) | (0.00287) | (0.00343) | (0.00611) | (0.00761) | (0.00469) | (0.00567) |

*Notes*: Panel A of Table D.14 is identical to Table 2, except the sample only contains ex-British colonies. Panel B of Table D.14 is identical to Table 3, except the specifications additionally control for a British colonialism indicator and interact it with both PCS indicators. The bottom part of Panel B contains marginal effect estimates for PCS under different values of British colonialism. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

## Table D.15: Cold War

| | Panel A. Civil war | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | -0.309 | -0.191 | -0.372 | -0.129 | -0.192 | -0.171 | 0.0555 | 0.0187 |
| | (0.909) | (0.915) | (0.981) | (1.010) | (0.676) | (0.700) | (0.713) | (0.750) |
| SLPCS group | 1.108* | 1.193** | 0.990* | 1.245* | 0.712 | 0.742 | 0.899* | 0.942* |
| | (0.572) | (0.589) | (0.599) | (0.738) | (0.460) | (0.459) | (0.528) | (0.560) |
| Cold War | -0.323 | -0.330 | -0.696 | -0.501 | -1.002 | -1.090 | -1.258* | -1.113 |
| | (1.040) | (1.031) | (1.043) | (1.020) | (0.714) | (0.715) | (0.744) | (0.746) |
| PCS group*Cold War | 1.862 | 1.726 | 1.964* | 1.778 | 2.082** | 2.012** | 2.000** | 1.887* |
| | (1.149) | (1.163) | (1.168) | (1.190) | (0.971) | (0.969) | (1.006) | (1.001) |
| SLPCS group*Cold War | 0.940 | 0.846 | 0.992 | 0.751 | 1.196 | 1.114 | 1.057 | 0.867 |
| | (0.934) | (0.933) | (0.962) | (0.998) | (0.778) | (0.759) | (0.811) | (0.813) |
| Group-years | 8,102 | 8,102 | 8,102 | 8,102 | 8,108 | 8,108 | 8,108 | 8,108 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Marginal effect estimates | | | | | | | |
| SLPCS group \| During Cold War | 0.00775*** | 0.00691*** | 0.00536*** | 0.00462*** | 0.0107*** | 0.00911*** | 0.00765*** | 0.00673*** |
| | (0.00254) | (0.00209) | (0.00195) | (0.00177) | (0.00291) | (0.00236) | (0.00244) | (0.00214) |
| SLPCS group \| After Cold War | 0.00323* | 0.00331* | 0.00291 | 0.00296* | 0.00526 | 0.00551 | 0.00643 | 0.00624 |
| | (0.00184) | (0.00175) | (0.00184) | (0.00170) | (0.00366) | (0.00358) | (0.00432) | (0.00408) |
| | Panel B. Coups | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.426 | 0.442 | 0.331 | 0.683 | 0.596 | 0.543 | 0.411 | 0.675 |
| | (0.462) | (0.524) | (0.492) | (0.573) | (0.405) | (0.450) | (0.479) | (0.509) |
| SLPCS group | -2.470** | -2.404** | -2.328** | -2.045** | -1.158** | -1.186*** | -1.069** | -0.844 |
| | (1.017) | (1.019) | (1.024) | (1.019) | (0.451) | (0.460) | (0.512) | (0.518) |
| Cold War | 0.260 | 0.0275 | 0.426 | 0.426 | 0.0201 | -0.168 | -0.125 | -0.117 |
| | (0.355) | (0.361) | (0.413) | (0.415) | (0.342) | (0.340) | (0.345) | (0.343) |
| PCS group*Cold War | 0.587 | 0.662 | 0.486 | 0.447 | 0.0957 | 0.161 | 0.167 | 0.155 |
| | (0.527) | (0.521) | (0.558) | (0.558) | (0.459) | (0.451) | (0.493) | (0.498) |
| SLPCS group*Cold War | 2.339** | 2.276** | 2.309** | 2.231** | 0.977** | 0.922* | 1.043* | 0.958* |
| | (1.090) | (1.099) | (1.110) | (1.113) | (0.498) | (0.494) | (0.534) | (0.518) |
| Group-years | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 | 8,567 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Marginal effect estimates | | | | | | | |
| PCS group \| During Cold War | 0.0150** | 0.0137** | 0.00969** | 0.0111** | 0.0133* | 0.0116* | 0.00863* | 0.0109** |
| | (0.00664) | (0.00647) | (0.00470) | (0.00485) | (0.00730) | (0.00664) | (0.00509) | (0.00539) |
| PCS group \| After Cold War | 0.00354 | 0.00372 | 0.00199 | 0.00342 | 0.0107 | 0.00969 | 0.00634 | 0.00910 |
| | (0.00424) | (0.00474) | (0.00312) | (0.00317) | (0.00777) | (0.00857) | (0.00782) | (0.00755) |

*Notes*: Panel A of Table D.15 is identical to Table 2, and Panel B of Table D.15 is identical to Table 3, except the specifications in Table D.15 additionally control for a Cold War indicator (1 for all years up to and including 1989, and 0 otherwise) and interact it with both PCS indicators. The bottom part of each panel contains marginal effects for the theoretically relevant pre-colonial statehood indicator during and after the Cold War. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

## D.4 Evidence for Conditional Hypotheses

Table D.16 assesses the three conditional civil war and coup hypotheses (H4 through H6). Panel A is analogous to Table 2 except the sample consists only of excluded ethnic group-years, and Panel B is analogous to Table 3 except the sample consists only of included ethnic group-years.[134] Appendix Tables C.3 and C.4 provide associated summary statistics for the samples of excluded and of included ethnic group years.

**Table D.16: Conditional Ethnic Violence Results**

| | Panel A. Civil war. Sample: Excluded ethnic group-years | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | DV: Major ethnic civil war onset | | | | DV: Major CW onset (ethnic participation) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 1.417** | 1.386** | 1.573** | 1.784** | 1.575*** | 1.472*** | 1.475*** | 1.467*** |
| | (0.592) | (0.631) | (0.614) | (0.698) | (0.456) | (0.470) | (0.497) | (0.531) |
| SLPCS group | 1.110** | 1.106** | 1.386*** | 1.508*** | 0.661 | 0.573 | 0.718* | 0.691 |
| | (0.513) | (0.511) | (0.503) | (0.571) | (0.407) | (0.403) | (0.422) | (0.445) |
| Group-years | 3,196 | 3,196 | 3,196 | 3,196 | 3,196 | 3,196 | 3,196 | 3,196 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |
| | Panel B. Coups. Sample: Included ethnic group-years | | | | | | | |
| | DV: Successful coup | | | | DV: Coup attempt | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PCS group | 0.873** | 0.963** | 0.752** | 1.063** | 0.921*** | 0.882** | 0.784** | 0.984** |
| | (0.356) | (0.481) | (0.348) | (0.441) | (0.342) | (0.445) | (0.339) | (0.391) |
| SLPCS group | 0.121 | 0.441 | 0.251 | 0.591 | 0.194 | 0.439 | 0.279 | 0.590 |
| | (0.378) | (0.426) | (0.391) | (0.499) | (0.337) | (0.369) | (0.337) | (0.363) |
| Group-years | 4,969 | 4,969 | 4,787 | 4,787 | 4,969 | 4,969 | 4,787 | 4,787 |
| PCS origins covariates? | NO | YES | NO | YES | NO | YES | NO | YES |
| Standard conflict covariates? | NO | NO | YES | YES | NO | NO | YES | YES |
| Event history controls? | YES | YES | YES | YES | YES | YES | YES | YES |

*Notes*: Table D.16 summarizes logistic regression estimates with ethnic group-clustered standard errors in parentheses. Section 3 describes the data, and the covariates in different columns correspond to Tables 2 and 3. Differences in observations across the coup regressions arise because the logit models drop oil-rich groups: in included group-years, they did not participate in any coup attempts. $^{***}p < 0.01$,$^{**}p < 0.05$,$^{*}p < 0.1$.

Supporting Hypothesis 4, the predicted probabilities in Column 1 of Panel A show that excluded PCS groups initiated civil wars 4.0 times more frequently than excluded SL groups, in 1.86% of ethnic group years compared to 0.46%. Supporting Hypothesis 5, excluded SLPCS groups initiated civil wars 3.0 times more frequently than excluded SL groups, in 1.37% of ethnic group years.[135] Supporting Hypothesis 6, the predicted probabilities in Column 1 of Panel B show that included PCS groups participated in successful coups 2.4 times more frequently than included SL groups, in 1.71% of ethnic group years compared to 0.72%. These estimates remain statistically significant across most specifications, although the coefficient estimates for SLPCS groups in Columns 5 through 8 of the civil war regressions hover around the 10% threshold. One possibility is that the SLPCS estimates are larger in Columns 1 through 4 of Panel A because strategic ethnopolitical exclusion more strongly affects ethnically aimed rebellions than general rebellions.

[134] For expositional simplicity and because of separation issues, I present results from truncated samples rather than from models with interaction terms.

[135] Appendix Section B.5 proposes an explanation for why the magnitude of the estimated effect is larger for PCS than for SLPCS groups based on PCS groups' greater likelihood of being the strong type of rival.

# E Supporting Information for Section 6

This section presents additional notes and references for cases discussed in Section 6. The end of the appendix contains full citations for these references.

- Benin: Decalo (1990) discusses the coups.
- DRC: Vogt et al. (2015), specifically, page 343 of the EPR Atlas, discuss Lunda's secession attempt led by their king.
- Ghana: Owusu (1989, 381) discusses denouncing Nkrumah's attempts to undermine traditional Asante organizations. Boone (2003, 159-163) discusses the Nkrumah-Asante colonial rivalry.
- Guinea: Cowan (1962, 201) discusses Peul's regional party during decolonization.
- Madagascar: Harkness (2018) and Schraeder (1995, 18-19) discuss Highlanders' strong presence in the military.
- Zambia: Caplan (1970) discusses Barotse's regional party during decolonization.
- Zimbabwe: The main text states that in the second modal path of violence in PCS countries, a non-PCS group dominated the government at or shortly after independence. Although Zimbabwe's Shona did not achieve "dominant" status until 20 years after independence in 1980, between 1982 and 1987 they shared power only with Europeans, i.e., were dominant among all African groups.

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