# Emperors without Scepters: Early Colonial Leaders' Personality and Civil Conflicts

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July 2021

#### Abstract

We investigate the role of colonial leaders in shaping contemporary civil conflicts in former French colonies in Western Africa. We argue that the earliest leaders of the colonial era made key decisions in building local government that shaped local perceptions of, and interactions with, the state that led to variation in the local populations' hostility towards the colonial government. Using the arguably arbitrary assignment of early colonial district leaders, we show that the personality of the first district leaders affected colonial hostility, and that such hostility has led to more modern civil conflicts.

JEL Codes: D73, D74, N47, Z13.

Keywords: Colonialism, civil conflicts, state building, state capacity, leader personality, French Western Africa.

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## 1 Introduction

In the quest to understand long-term social, political, and economic phenomena, modern research in social sciences has focused on macro-level quantities, such as physical and human capital, and large-scale social features such as institutions, rules, and norms. As a result, influential individuals, once the focal point of most historical studies, have gradually become side-lined in the studies of causes and effects of major social changes. In the area of conflict studies, the once dominant role of individuals in the scholastic literature, from military genius to belligerent autocrats, has ceded its place to a multitude of socioeconomic determinants, ranging from climatic conditions to institutions and culture. Understanding armed conflicts, one of the modern world's biggest problems, is often born down to understanding the social forces, in the present and in the past, that have shaped their onsets and offsets, that extend much further beyond any single individual.

This paper attempts to bring individual leaders and their personality back in studies of conflicts, with evidence that local leaders and their selection may matter profoundly to the arrival and persistence of civil conflicts during a certain window of opportunity, or "critical juncture". We focus on the first French colonial leaders of districts in the colonies of French Western Africa — "Afrique Occidentale Française" (AOF) in French — at the beginning of the 20th century, and show that their personality traits influence the hostile tensions those districts experienced during the colonial period which predicts the prevalence of modern civil conflicts.

The French colonial context gives us a good setting for a comparative econometric study of leadership and conflicts. The history literature (Cohen 1974, Conklin 1997) has provided ample anecdotal accounts of the power of district leaders — "administrateurs de cercles" in French — in shaping most local policies of the vast AOF, ranging from taxes and tariffs to public spending in health, education, and other infrastructure. It has also documented that some of those policies regarding taxes, forced labour, and conscription, heightened tensions between the colonial government and the local population, leading to unrests and revolts. What was missing is a quantitative, data-based examination of the long-run link with contemporary outcomes, among which conflicts are probably the biggest problem. We set out to provide such quantitative evidence, using the sufficient, and arguably arbitrary variation in the background and characteristics of colonial district administrators (Cohen 1974, Delavignette 1939).

We undertook a large data collection effort to retrieve official colonial records of AOF, including records of all district leaders. Those records help reconstruct different measures of the life in those colonies since the beginning of the colonial era. Notably, we construct measures of the hostile tension between the local population and the district government, which in many cases escalated to outbreaks of protests and revolts. We also use collected information on leaders' backgrounds as well as their evaluations by the colonial administration which recorded assessments along certain personality traits to build a data-driven indicator of their personality.

We first document that hostility during the colonial period in AOF has strong predictive power on modern violent state-related conflicts. While the persistence of conflicts has been mentioned in earlier cross-sectional studies, both world-wide (Fearon and Laitin 2012) and in Africa (Besley and Reynal-Querol 2014), we show that hostility towards the colonial state due to local dissatisfaction with taxation and military recruitment policies is positively correlated with the prevalence of modern civil conflicts at the local level and can explain some of the within-country variations in the incidence of conflicts.

We then explore the link between the personality of early colonial leaders and hostility towards the state and show that the personality of the first district administrators has a lasting effect on hostility. Based on the assumption that both candidates and vacancies for the position of district administrator during the early colonial period in AOF were brought up rather arbitrarily, as detailed in the historical accounts of district leaders in Cohen (1974), and therefore assigned in an exogenous way, we show that administrators with good personality traits significantly reduce the chance of experiencing hostility with the local population. On the other hand, districts which were assigned an administrator with more negative personality traits subsequently experienced a greater incidence of hostility throughout the colonial period. Combined with the predicted link between colonial hostility and modern conflicts, we establish that colonial leaders' quality is an important determinant of conflicts today.

This paper contributes to several economic literatures. First, by emphasising the role of leadership, this paper contributes to a growing literature on leaders in development economics (e.g., Chattopadhyay and

Duflo, 2004) and financial economics (e.g., Bertrand and Schoar, 2003). We provide further evidence that leadership could have lasting impacts on development within specific windows of opportunity. It thus asks for more attention towards the active role of leadership in forming development policies, and its consequences in the long-run. It can go beyond the Jones and Olken's (2005) finding, that changes in leadership can lead to changes in growth perspectives, by pointing out which leadership characteristics can lead to effective state building, and which characteristics can raise local tensions and induce civil conflicts even a century later.

We also contribute to the view that the capacity of the state is essential for long-term development (Besley and Persson 2009, 2010), by not only showing long-term persistent effects, but also specific channels how to improve state capacity during a nascent period. Our research thus follows a recent literature studying details of bureaucratic systems and their effectiveness in public policies (e.g., Bertrand et al. 2016, Dal Bó et al. 2013).

By clarifying the historical roots of political attitudes and conflicts in Africa, we add to the literature of conflict studies on determinants of conflicts (e.g., Fearon and Laitin 2003, Besley and Reynal-Querol 2014). Unlike geographical long-term determinants of conflicts, the historical determinants we consider have very different policy implications. If they matter in the long-run through political attitudes, policies should focus more on public goods that could reduce political adversity towards the state.

Finally, we contribute to the large political economy literature on long-term development and changes in institutions and values (Nunn 2014, Nunn and Wantchekon 2011) by investigating the role of leadership and leaders' policies as determinants of modern political institutions, possibly through conflicts and political attitudes. While cultural values can be rather persistent over time, we hope to show that during a critical juncture (Acemoglu et al. 2001, 2005) they can be strongly affected by policies and institutional changes.

The rest of this paper is organised as follows: Section 2 describes the historical background of the French colonies in West Africa. Section 3 details our measures of colonial hostility and modern civil conflicts and shows evidence of a long-term persistence of local hostility towards the state. Section 4 describes our data on colonial administrators and our measure of administrator personality. Section 5 describes our empirical strategy and tests the exogeneity of our personality measure for the first colonial administrators. Section 6 presents our empirical results and section 7 concludes.

## 2 Historical Background

## 2.1 French Colonisation in West Africa and the Role of Colonial Administrators

The French first arrived in 1854 on the Senegalese coasts, driven by the General Louis Faidherbe. At this time, the West African territory was politically heterogeneous. Some areas included first states, also called kingdoms or empires, in which full-time rulers claimed authority over individuals within a defined territory, like Fuuta Jaalo in Guinea, Bawol in Senegal, Kong in Ivory Coast, Kaarta in Mali, Sokoto in Niger, Wagadugu in Burkina Faso, the Emirate of Adrar in Mauritania, or Dahomey in Benin. In other areas, authority was so dispersed that no rulers could be identified, which constituted stateless societies based on lineage, also called "lineage-based societies", "decentralised societies", "segmentary societies", or "autonomous local systems" (Murdock, 1967; Barrett, 1968; Mitchell, Morrison and Paden, 1989). Examples of this type of areas include the zone in the Guinean forest that became the districts of Gueckedou and N'Zerekore, or the mid-East of Ivory Coast that became the districts of Guiglo and Man. Between these two extremes political structures, anthropologists identify a third category called "chiefdoms", which were smaller political units than kingdoms.

Until 1880, colonial military campaigns were limited to coastal incursions in current Senegal, Mauritania, Guinea and South Benin. Most of the colonial expansion occurred in the 1880's from South to North and from West to East. Although the military conquest was not yet achieved, French West Africa — "Afrique Occidentale Franaise" — was officially created in 1895 as a federation of colonies including Senegal, Guinea, Dahomey, French Soudan, and Ivory Coast. Upper-Volta, Niger, and Mauritania were not yet "pacified" in 1895 and were constituted as separate colonies until 1920. At that time, AOF was a vast territory of 4 800 000 km2 inhabited by a population of around 12 million people, resulting in a low population density of around 2.5 people per square kilometre. Towns were scarce and small; 1900s colonial censuses report that the five biggest towns were Saint-Louis (about 24 000 people), Dakar (18 400), Rufisque (12 500), Conakry (8 200) and Cotonou (4 400) (Huillery 2011).

The Federal Government became effective in 1904 but local civil administration progressively expanded throughout the whole territory from 1890 to 1920. French colonial administration was structured as a pyramid, with the "General Governor" at the head of the federation, while "Lieutenant-Governors" were below at the head of the colonies and administrators were another step below at the head of the districts within each colony ("cercles" in french). African chiefs were at the bottom of the pyramid. The colonial administration designated local chiefs as "village chiefs" and limited their influence to small areas.

In this organisation, the effective power was concentrated in the hands of the district administrators who were "the real chiefs of the French empire" (Delavignette 1939). Their tasks included overseeing tax collection, representing the Lieutenant-Governor in all official events, counting people living in the district, drawing up the district's map, steering elementary schools, inspecting Koranic schools, planning and supervising the building of roads, bridges, wells and tracks, and arresting criminals and judging them. Due to ignorance of local situations by the colonial hierarchy, French administrators could manage their local policy in an almost independent way (Delavignette 1939, Cohen 1974, Suret-Canale 1964, Association des anciens élèves de l'école coloniale 1998). Even the colony governors were not able to travel and visit districts regularly, making it difficult to monitor local policies. From 1906 on, governors could hire inspectors to visit all administrators, but inspectors had a limited capacity to supervise and monitor administrators due to long distances and lack of efficient rapid means of communication. Therefore, colonies looked like "federations of districts" (Cohen, 1974) in which French district administrators seemed "omnipotent" (Suret-Canale 1964) and faced "no counter-power until 1945" (Gervais 1996).

Importantly, district administrators were in direct contact with the population. Every year, they were responsible for visiting each village in the district at least once (Cohen 1974, Gervais 1996). The main objective of these visits was to perform the population census to establish the tax base. This task is described as key in administrators' mission and role as it meant that administrators were "in charge of the contact with the population" (Association des anciens élèves de lécole coloniale, 1998). Indeed, the population census was nominative instead of just numerical. Therefore, the colonial district administration was seeking each individual to fill out the census form every year. As put in Georgy (1992), the population census was a "confrontation between each individual and the district commandant". For African populations, the district administrator was the personalised figure of the colonial state.

In contrast, African chiefs who had had control over a larger territory before colonisation were excluded from the colonial administrative organisation; they either signed an oath of allegiance which entitled them to an annual financial transfer in exchange of their withdrawal from political power, or were arrested, exiled, or killed, like Samori in East Guinea, Alpha Yaya in Fuuta-Jaalo, Aguibou in Macina, Ago-li-Agbo in Abomey, or Mademba in Sansanding (Suret-Canale 1964). Another example is the Mossi King which was kept in a purely religious position. The official tasks of African village chiefs were to assist French administrators and facilitate tax collection and recruitment for forced labour ("prestations") and military reservists ("tirailleurs"). The number of reservists to recruit and the amount of taxes to collect was defined by French administrators so African village chiefs were quartered to auxiliaries of French colonial administrators. In 1917, General Governor Van Vollenhoven released a memorandum that officially defined the African chief policy: while he called for respect of local traditions and historical legitimacy of chiefs, he also reaffirmed that African chiefs had no personal power and were placed under the exclusive authority of French district administrators (Suret-Canale 1964). The French colonial rule thus led to a profound reduction in the role of traditional chiefs.

#### 2.2 French Administrators and Political Conflicts

Ongoing local hostility remained a thorny issue even after military conquest was completed. District administrators devoted an important part of their annual reports to problems related to hostility from the population or from African chiefs. Hostility towards colonial rule could have important consequences for the everyday life and management of districts. Popular discontent, riots, or opposition from the local chiefs or population could prevent administrators from implementing colonial authority and projects, while the participation of local people was necessary for many colonial public or private activities like trade, agriculture or public works. Moreover, difficulties in collecting taxes, in enforcing forced labour ("prestations"), or in recruiting civil servants to serve as policemen ("gardes de cercle") or interprets directly affected the material resources and functioning capacity of the colonial administration. Adu Boahen (1989) underlines the frequency of riots, strikes, and protests against the harshness of colonial rule. Hostility was therefore a crucial issue for the colonial administration and was the main subject of the annual political reports written by district administrators to the governor of their colony.

Huillery (2011) shows that early hostility was significantly higher in more densely populated areas and in desert-edge areas, indicating that economic prosperity encouraged resistance and hostility. Initial political development also influenced hostility towards colonial power in a non-linear way. Kingdoms and amorphous areas were more hostile than the rest of the region — both plenty and lack of social authority were hard to control by the colonial power. There was also a correlation between Islam and hostility towards colonial rule, which was frequently mentioned in administrators' annual reports. Hostility was thus evidently correlated with intrinsic district characteristics that also potentially influenced their development path.

Yet, early hostility is often presented in the historical literature as a mismatch between specific colonial administrators and local populations, and not only as the result of precolonial district characteristics. An important source of hostility, reported in Cohen (1974), was the attitude of French colonial administrators towards the population and their vision of the role of colonialism, which also exhibited a high level of heterogeneity. Some colonial administrators were diplomatic and succeeded in creating a favourable political climate with local people, whereas others were brutal, implementing violent colonial rules and provoking aggressive reactions. Cohen (1974) reports five types of administrators: (i) former military officers, described as the most brutal and violent with local populations; (ii) former metropolitan civil servants, described as inappropriate for colonial commandment; (iii) former Governor secretaries, described as good for administrative work but not for management; (iv) former administrators' assistants, described as not much educated but well-informed on the work of an administrator; and finally (v) former pupils of the French colonial school (the "École Coloniale", later re-named "École nationale de la France d'outre-mer" or ENFOM), described as well-educated, part of the French elite. He also emphasises the relationship between the administrators' educational and familial backgrounds and their vision of colonisation (e.g. more or less humanist).

Given administrators' de facto decision-making power, different types of administrators led to different colonial states. An important source of variation of the colonial state was the level of taxes. Bouche (1991) notes that tax pressure varied with local economic conditions as well as with "the humour of the administrator". Kambou-Ferrand (1993) reports that tax collection during an administrator's tour came with "irregularities and abuses" but also with "great disparities". Cohen (1974) reports that some administrators set abusive tax levels in view of the contribution capacity of the population, either in the form of excessive tax rates ("capitation") or in the form of excessive numbers of days of forced labour ("prestations"). Cohen also points to large variations in the level of fines ("amendes") and in the use of "violent and tyrannical" methods to collect taxes such as hostage-taking. Besides these violent administrators, Cohen underlines the existence of administrators with opposite manners and values: "valorous, loving indigenous people, and loved by them". He describes these administrators as sensitive to indigenous people's needs. Following Cohen, the specific personality of administrators was therefore a strong determinant of the policies they implemented, in particular at the beginning of the colonial period.

## 2.3 Historical Persistence: Why Could Early Colonial Administrators Matter?

This paper proposes an empirical evaluation of whether early colonial administrators had a persistent effect on political conflicts. The historical literature suggests that the early colonial period presented a critical juncture which shaped long-term outcomes.

First, during the colonial period, new administrators had limited room to change the policies set up by the previous administrators due to high turnover (Cohen, 1974). Public investments in the late colonial period were also highly correlated to public investments in the early colonial period, which indicates strong path dependency (Huillery, 2009). Moreover, the treatment of traditional chiefs in early colonial times was largely irreversible, especially when traditional chiefs have been exiled or killed.

Second, independence did not introduce a fundamental discontinuity. The administrative organisation today is largely inherited from the colonial period in both geographical and institutional terms (Clauzel 2003, Cohen 1974). After independence, district boundaries were often maintained with the same hierarchical administrative structure except that African administrators, often previous auxiliaries, replaced French ones. As traditional chiefs had been marginalised throughout the colonial period, it was often not possible to rely on local traditional authorities to build independent states so these states reproduced the colonial model.

# 3 Measures of Political Conflicts and Persistence of Hostility Towards the State

## 3.1 Measures of Hostility Towards the Colonial State

Our study builds on datasets from Huillery (2009, 2011) for colonial districts of AOF, collected from resources in the French national archives and historical sources. Since colonial boundaries shifted over time as the federation expanded and evolved, we use colonial administrative boundaries from 1925 as our reference when combining data sources and generating colonial district level measures.

We collected and aggregated data at the level of colonial districts, as defined in 1925, using administrative boundaries from a digitalised map of AOF in 1925 from the "Documentation Française", available from Gallica — the digital repository of the French National Library. Figure 1 shows colonial boundaries in AOF in 1925 used for data collection, compared to present day national borders, which cover 8 colonies<sup>1</sup> divided into 112 administrative districts ("cercles"). Since Dakar and Saint Louis both served as the capital of AOF and residence of the Governor General<sup>2</sup>, and administrators in these districts did not have the same functions or level of autonomy as in other districts, we exclude this two from our analysis. This leaves us with a sample of 110 colonial districts in 8 colonies.

Our measure of colonial hostility is generated from data collected by Huillery (2011) from the Annual Political Reports to the Governor, accessible in the French National Archives. These reports were written by district administrators to inform the governor on the political climate in each district of the colony and chronicled political events that occurred in their district during the year, including good/bad disposition of the population, riots, opposition from local chiefs, difficulties in collecting taxes or in recruiting civil servants, refusal to do coerced labour, etc. Data was collected for each year ending in '3', '6' or '9' from 1906 to 1956. Reports of hostility towards the colonial authorises were coded based on the source of hostility, if hostility has due to conflicts related to taxes, military recruitments, property rights, colonial borders or other , as well as the degree of severity of these events and if they were reported by administrators as not very significant or rather as a threat or a major threat to the colonial power at the time.

Our analysis focuses on reported bouts of severe hostility to colonial rule due to taxes or military recruitment. As mentioned in the previous section, taxes and military recruitment, including recruitment for forced labour and military reservists, were particularly important sources of tension with local populations and affected early interactions with colonial authorities. Our main variable of interest is the prevalence of severe hostility towards the colonial state in administrative districts due to taxes or military recruitment. For each year of data collection, we observe if there were reports of severe hostility in that year and calculate the proportion of years with reported episodes of hostility over a given time period.

Or measure of hostility for each district d in colony c is then calculated as:

$$Hostility_{d,c} = \frac{1}{N} \sum_{n=1}^{N} \mathbb{1}_{E(n)>0}$$

where N is the number of years observed for a given time period and  $\mathbb{1}_{E(n)>0}$  is an indicator function which takes the value 1 if severe hostility due to taxes or military recruitment are reported in the district for year n. We calculate the prevalence of hostility due to taxes and military recruitment over then entire colonial period covered in the data set, from 1906 to 1956, as well as for sub-periods including 1906-1919, 1923-1939 and 1943-1956. Figure 2 illustrates the prevalence of colonial hostility due to taxes or military recruitment in districts between 1906 and 1956.

Descriptive statistics for our measures of hostility, as well as geographic and historical controls for colonial districts, are presented in Table 1<sup>3</sup>. Looking at the full period covered in our sample, from 1906 to 1956, the proportion of years reporting episodes of hostility towards the colonial state in districts ranges from 0 to 0.58, with a mean of 0.05. Looking at sub-periods, the prevalence of hostility ranges from 0 to 0.8 for the early colonial period from 1906 to 1919, from 0 to 0.5 for the 1923-1939 period, and from 0 to 1 for the 1943-1956 period between the second world war and decolonisation.

<sup>&</sup>lt;sup>1</sup>Excluding French Togoland which was under French mandate following the first World War.

 $<sup>^{2}</sup>$ Saint-Louis was the capital of AOF from 1985 to 1902, while Dakar served as the capital of the federation from 1902 to 1960.

 $<sup>^{3}</sup>$ A more detailed description of historical and geographic controls for colonial districts is presented in the data appendix.

## 3.2 Modern Civil Conflicts

We take data on conflict events from the Uppsala Conflict Data Program Georeferenced Event Dataset (UCDP-GED) which include georeferenced events of individual incidents of lethal violence connected either to an armed conflict, a one-sided conflict or a non-state conflict starting from 1989. Incidents of lethal violence are defined as events where armed force was used by an organised actor against another organised actor, or against civilians, resulting in at least 1 direct death at a specific location and a specific date. Armed conflicts are defined as a contested incompatibility that concerns a governance and/or territorial dispute where the use of armed force between organised actors, at least one of which is the government of a state, results in at least 25 battle-related deaths in a calendar year<sup>4</sup>. We use data for the 1989-2016 period.

The locations of UCDP-GED conflict events in countries which were formally part of AOF are presented in Figure 3. As our analysis focuses on the impacts of administrators on hostility towards the state during the colonial period and present-day civil conflicts, we focus on armed conflict events between the state and organised non-state actors<sup>5</sup>.

In order to generate local measures of civil conflicts, and control for more detailed local characteristics, we take as the unit of observation the intersection of colonial district boundaries with  $0.5 \times 0.5$  degree grid-cells, defined as  $0.5 \times 0.5$  degrees latitude and longitude. Our unit of observation is then the cell-polygon, defined by overlapping grid-cells and colonial district boundaries such that each cell-polygon is uniquely matched with one gird-cell, one colonial district and one present day country<sup>6</sup>. Overlaying grid-cells with colonial districts gives us a sample of 2 689 cell-polygons. Considering only cells which fall in colonial districts where we observe the personality of the first colonial administrator reduces the sample to 955 cell-polygons.

Matching geocoded UCDP-GED state-based conflicts events with cell-polygons, we then calculate the prevalence of civil conflicts in each cell, defined as the proportion of years between 1989 and 2016 which saw conflict events in that cell. Our measure of civil conflicts for each cell-polygon g which falls in colonial district d and present-day country k is then calculated as:

$$CivConf_{g,d,k} = \frac{1}{N} \sum_{n=1}^{N} \mathbb{1}_{E(n)>0}$$

where N is the total number of years observed in the dataset and  $\mathbb{1}_{E(n)>0}$  is an indicator function which takes the value 1 if there were any civil conflict events in the cell-polygon in year n.

Figure 4 illustrates the prevalence of state based conflicts in cells. The number of years with civil conflict events in cells ranges from 0 to 16, while the average number of years of conflicts in cells is 0.11. We also test our results using a measure of intensity of civil conflicts, which takes the average number conflict events in a year in a cell-polygon rather than the proportion of years with conflict events<sup>7</sup>, with results presented in supplemental tables in the appendix.

Descriptive statistics for our sample of cell-polygons are reported in Table 2. Overall, civil conflicts are rare events in cells, with the vast majority experiencing no civil conflict events throughout the 1989-2016 period. On average, the proportion of years with conflict events for cells in our sample is 0.004, while the average number of conflict events in a year is 0.008. The average prevalence of colonial hostility over the 1906-1956 period for cells in our sample is 0.057.

#### **3.3** Persistence of Hostility Towards the State

We first explore the persistence of conflicts and test if hostility towards the state during the colonial period predicts present-day civil conflicts. If the colonial administration shaped the capacity and legitimacy

<sup>&</sup>lt;sup>4</sup>See the UCDP-GED codebook (version 17.1), Sundberg and Melander (2013) and Allansson, Melander and Themnér (2017) for more details on definitions and sources used for the construction of the UCDP-GED and UCDP/PRIO Armed Conflict datasets.

 $<sup>^{5}</sup>$ As no inter-state conflict events are recorded in the countries of interest for the 1989-2016 period, all sate-based armed conflict events in UCPD-GED for this period are kept in our sample of civil conflict events.

<sup>&</sup>lt;sup>6</sup>Appendix Figure A1 presents a map of cell-polygons generated from the intersection of colonial district boundaries, modern country borders and grid-cells.

<sup>&</sup>lt;sup>7</sup>We calculate the intensity of civil conflicts as:  $CivConfIntensity_{g,d,k} = \frac{1}{N} \sum_{n=1}^{N} S_{g,d,k,n}$  where N is the total number of years observed and  $S_{g,d,k,n}$  is the number of civil conflict events in the cell in year n. The average yearly number of civil conflict events in a cell range from 0 to 2.14, with an average of 0.008. Appendix Figure A2 illustrates the intensity of civil conflicts in cell-polygons.

of the state at the local level, affecting local attitudes towards state institutions, and modern states largely continued colonial governance structures at the local level after independence, then we expect to find a positive correlation between colonial hostility and present day civil conflicts.

We evaluate the persistence of conflicts using the following estimation model:

$$Conflicts_{q,d,k} = \alpha + \beta_1 Hostility_d + X'_{q,d,k} \Gamma + \mu_k + \varepsilon_{q,d,k}$$
(1)

where  $Conflicts_{g,d,k}$  is the prevalence of modern civil conflicts in cell g within the boundaries of colonial district d in country k, and  $Hostility_d$  is our measure of colonial hostility for the 1906-1956 period.  $X_{g,d,k}$  represents a vector of geographic, historical, cell development and ethnic group controls<sup>8</sup>, while  $\mu_k$  denotes country fixed effects. All reported results have standard errors clustered at the colonial district level.

Geographic controls combine both district level and the cell level controls. District level controls include the total area of colonial district d, the distance from the district to the nearest colonial port, the ruggedness index<sup>9</sup> and malaria ecology index<sup>10</sup> of the district, an indicator if the district was on the coast, an indicator if the district featured a navigable river, and an indicator if the district touched a present day national border. Cell level controls include the latitude and longitude of the cell centroid, the total land area of the cell-polygon, a ruggedness index for the cell-polygon, the average travel time from the grid-cell to the nearest major city, the natural log of distance from the cell to the country's national capital, the natural log of distance to the nearest land-contiguous border, the natural log of distance to the coast, two indicators for the presence of gold<sup>11</sup> or diamond<sup>12</sup> deposits in the cell-polygon, and indicator if the cell is adjacent to a national border, and two indicators if the cell falls in a hot desert or hot semi-arid climate zone<sup>13</sup>.

Historical controls include colonial district population density in 1910, an indicator if the predominant precolonial polity in the district was a kingdom, and an indicator if the dominant polities in the district were acephalous societies, the year colonial conquest started in the district, the number of years of resistance to colonial conquest in the district, and an indicator for the presence of historical conflicts in 1400-1700 in the cell<sup>14</sup>. Ethnic group controls include a set of indicators for the presence of 27 ethnic-culture group historical homelands in the cell as well as a measure of ethnic fractionalization within a 100km radius<sup>15</sup>. Development controls at the grid-cell level include the grid-cell population density in 1990, gross product in 1990, total area equipped for irrigation in 1990, the percentage of the grid-cell covered by urban areas in 1990, the percentage of the grid-cell covered by agricultural areas in 1990 and the percentage of the grid-cell covered by forests in 1990.

Estimation results are reported in Table 3. Column 1 reports results with only country fixed effects, while column 2 through 5 present results gradually adding geographic, historic, culture group and gridcell development controls. Columns 6 and 7 present results for estimations using a Post-Double-Selection LASSO correction (Belloni, Chernozhukov and Hansen, 2013, 2014, 2015; Ahrens, Hansen and Schaffer, 2018). Overall, we see a positive and statistically significant correlation between the prevalence of colonial hostility and modern-day civil conflicts. This indicates that areas which experienced more years of hostility towards the colonial state in the first half of the century also experience more years with civil conflict

<sup>&</sup>lt;sup>8</sup>More details on the sources and construction of controls are presented in the data appendix

 $<sup>^{9}</sup>$ The colonial district ruggedness index is calculated by overlapping digitalised maps of district boundaries with raster data on terrain ruggedness from Nunn and Puga (2012) and calculating the average ruggedness index for the district.

 $<sup>^{10}</sup>$ The malaria ecology index for the district is generated by overlapping digitalised maps of district boundaries with a map of malaria ecology from Kiszewski et al.(2004) and taking the average value of the malaria ecology index (as calculated by Kiszewski et al., 2014) of all areas which fall within the district.

 $<sup>^{11}\</sup>mathrm{Data}$  on locations of gold mines are taken from the US Geologicap Survey Mineral Resources Data System.

 $<sup>^{12}</sup>$ Data of locations of diamonds are taken from the DIADATA dataset, prepared by Gilmore, Gleditsch, Lujala and Rod (2005) at the Centre for the Study of Civil War, PRIO.

 $<sup>^{13}</sup>$ Data on climate zones are taken from world maps of the Kppen-Geiger climate classification developed by Rubel and Kottek (2010).

<sup>&</sup>lt;sup>14</sup>Data on historical conflicts are taken from Besley and Reynal-Querol (2014).

<sup>&</sup>lt;sup>15</sup>Geographical data on the location of ethnic homelands are generated by overlapping district boundaries with digitalised maps from Murdock (1959) which show the historical borders of ethnic groups during the nineteenth century and using the definition of culture groups from the Human Relations Area Files database, housed at Yale University. Appendix Figure A3 illustrates the boundaries of ethnic/culture groups from Murdock's map, overlapped with colonial district borders in 1925. Ethnic fractionalization within a 100km radius for each cell is generated using a similar approach to the one proposed by Alesina et al (2003), but taking the share of land area of culture groups (using boundaries form Murdock maps) rather than share of population. Ethnic fractionalization is calculated as  $Frac_g = 1 - \sum S_{e,g}^2$  for  $S_{e,g}$  the share of area of culture group *e* relative to the total land area within a 100km radius of the centroid of cell *g*.

events post-1989. Taking results from our most restrictive specification with the full set of controls, a one standard deviation increase in the prevalence of colonial hostility is associated with an average increase in the prevalence of civil conflicts of 0.003, or approximately 0.08 additional years of conflicts in a cell<sup>16</sup>. Considering that the mean prevalence of civil conflicts is 0.004 for the cells in our sample, these results are relatively large. We also find similar results when looking at the average number of civil conflicts in a year as a measure of intensity of civil conflicts, reported in appendix Table A1.

# 4 Colonial Administrators and Personality traits

Having established a positive correlation between hostility towards the colonial state during the first half of the 20th century and modern civil-conflicts, we next explore the persistent effect of colonial administrators on political conflicts, focusing on the personality traits of the first civilian administrators posted in colonial districts.

#### 4.1 Data on Colonial Administrators

We construct a novel database of colonial district administrators and their characteristics, covering civil administrators posted in colonies of AOF from 1885 to 1932, using archival data from the Official Journals of the colonies ("Journaux Officiels", or JO), the Bibliographic Dictionary of ENFOM and from personnel records stored at the "Archives nationales d'outre-mer" (ANOM), a branch of the French National Archives specialised in documents from the colonial administration.

We collected data on administrator postings to districts in the colonies of Senegal, Guinea, Ivory Coast, Dahomey, Upper Volta and French Sudan. The colonies of Mauritania and Niger were excluded as no exhaustive information on posting periods could be gathered from the JO. Overall, we can identify 3 279 appointments of administrators to districts, which corresponds to nearly all the postings for the sampled colonies between 1885 and 1932. We then collected information from administrator records covering their service period in our sample, as well as their first records as these usually contained more detailed information about previous experience. From these records, we could observe the following information: education, military experience, personality assessments by the hierarchy, order of merits received<sup>17</sup>, age, marital status, and experience in the administration. We were able to collect characteristics from personnel records for 742 administrators, corresponding to about 70.6% of administrators posted in AOF during the time period.

### 4.2 Measure of Personality of Administrators

Personality assessments were collected from annual assessments of administrators by their hierarchy and by colonial inspectors. During these assessments, administrators were evaluated along the following dimensions: behaviour ("conduite"), morality ("moralité"), temperament ("charactère"), relationship with superiors ("rapport avec les supérieurs"), relationship with peers ("rapport avec les égaux"), relationship with subordinates ("rapport avec les subordonnés"), conduct ("tenue et habitudes sociales"), capacity ("capacité"), and health ("santé"). We code handwritten assessments for each of these categories as either "Negative", "Neutral", "Good" or "Very Good" and attribute respective values -1, 0, 1 and 2 for each dimension for each assessment. The asymmetry in assessments comes from the fact that comments written for evaluations tended not the be extremely negative.

We use these assessments to construct a personality index for each administrator using all available entries relating to morality, temperament, relationship with superiors, peers and subordinates, and conduct<sup>18</sup>. Having coded each available assessment entry for the administrators in our sample, we then standardise and de-trend scores within each category and average assessments over all available years and personality

<sup>&</sup>lt;sup>16</sup>As the standard deviation for our colonial hostility index for gird-cells in our sample is equal to 0.082, a one standard deviation increase in colonial hostility corresponds to a  $0.082 * 0.0369 \approx .003$  increase in the proportion of years with conflict. Since UCDP-GED data cover 28 years (from 1989 to 2016), this is equivalent to 0.003 \* 28 = 0.08 additional years of conflict. <sup>17</sup>For example, if the administrator was awarder the French Legion of Honour.

<sup>&</sup>lt;sup>18</sup>Since the assessment entries for capacity, aptitude and health are less likely to capture the personality traits of administrators and more likely to be subject to external factors, we do not include these categories in the construction of the personality index.

dimensions, such that our personality index is constructed by taking the average of the standardised scores across each of the seven personality dimensions for each administrator.

# 5 Empirical Strategy: First Colonial Administrators as a Quasi-Natural Experiment

We exploit the largely arbitrary nature of assignment of new civilian administrators to colonial districts to evaluate the effect of the personality of the first colonial administrator on hostility towards the state. Importantly, Cohen (1974) describes that the assignment of an administrator to a specific district within AOF was a matter of vacancy and not a matter of selection. There was a selection between territories, such as West Africa versus Indochina, but not within territories. Indeed, graduates of the colonial school could choose to go to Indochina, West Africa, or other territories based on their graduation rank, with Indochina, the most popular territory choice of graduate, usually reserved for the best students and Equatorial Africa, the least popular, for the lowest ranked ones. Once assigned to a territory, however, Cohen (1974) argues that administrators did not choose the district they would serve in but were assigned to a district based on available vacancies at the time of their arrival, in part because of the shortage of able personnel a career in the African tropics was not highly regarded among the French elite at the time. Therefore, in his view, administrator assignment was largely arbitrary and independent of the existing conditions in a district. This was particularly true during the early colonial period when the resources of the colonial civilian administration were severely limited while at the same time having to cover an expanding territory.

We infer from Cohen's (1974) observation that the assignment of a district's first civil administrator is practically independent of a district's characteristics at that time. Indeed, a district's first civil administrator is needed just after its military conquest and pacification, the timing of which is unlikely controllable by the general governorship in Dakar, or from France, and therefore likely unrelated to the arrival of a potential administrator.

The inability of colonial administrators to select into positions was also reported to us during a focus group meeting that we organised in 2018 with former french colonial administrators from ENFOM who were posted in AOF shortly before decolonisation. During this focus group, interviewed former administrators also mentioned that they did not get to choose their posting, even in the 1950s, describing the assignment to districts as "au petit bonheur la chance" (haphazard). For example, one former administrator asked to be sent to the Ivory Coast but was assigned to Togo, while another one was assigned to Dahomey without being a volunteer. In their experience assignments tended to be based on needs and urgencies such as the replacement of sick colleagues. Some members of the group went as far as to say that it was a tradition of the French administration not to take into account the wishes of administrators.

## 5.1 Balance Checks for the Personality Index of Administrators and District Characteristics

Our key variable of interest is the personality index of the first civilian administrators in districts. We use data from colonial annual budgets collected by Huillery (2009) to identify the year when a district transitions from military occupation to civil administration. From our dataset of colonial administrators, we can observe the personality measures for the first administrator for 66 districts, presented in Figure 5.

If the allocation of the first administrators was indeed haphazard and positions were filled primarily with whomever was available when a new district moved to civilian rule, then the personality index of the first administrator assigned to a district should be uncorrelated with the characteristics of that district which were observable to the colonial administration at the time. To test this assumption, we conduct a balance check and regress the personality index of administrators on each observable district characteristic. Results are presented in Table 4. As Cohen (1974) noted that the quality of the colonial administration and of administrators gradually improved over time as the Federation became more established, we also report results controlling for the year the first administrator was posted in the district.

Overall, the personality of the first administrator appears to be uncorrelated with most district characteristics. Importantly, Personality is not correlated with either geographic characteristics or the type of pre-colonial political structure present. Not controlling for the year of arrival, there appears to be negative correlation with access to the sea and population density and a positive correlation with distance to the closest port, and the start and end years of colonial conquest. Personality also appears to be positively correlated with being posted prior to the full colonial conquest of the district. This suggests that there was little selection or sorting of administrators to posts. If anything, administrators with better evaluations may have been sent to more difficult districts at the time, such as districts further in-land, with more dispersed populations, or not yet under full French control.

## 5.2 Testing for potential effects of hostility on personality assessments of administrators

As our personality index for colonial administrators is built using all evaluations available for an administrator, whether before, during or after their first posting, we might be concerned that our measure of personality could indirectly reflect colonial experiences. If experiences of colonial hostility affected administrators' personality, or if episodes of hostility from local populations affected colonial inspectors' evaluations of district administrators, then our measure of personality might be biased.

To test this possibility, we look at the correlation between changes in administrator personality between evaluations and reported hostility in years between evaluations using the following estimation model:

$$\Delta PersInd_{a,(i,j)} = \alpha + \beta_1 Hostility_{a,(i,j)} + \varphi PersInd_{a,j} + \gamma \Delta Y_{(i,j)} + Y_i + X'_a \Theta + \mu_c + \varepsilon_{a,(i,j)}$$
(2)

where  $\Delta PersInd_{a,(i,j)}$  is the change in the personality index for administrator *a* between his evaluation in year *i* and his prevaluation in year *j*, for i > j.  $Hostility_{a,(i,j)}$  is the prevalence of hostility between year *j* and *i* for each district that the administrator was posted in between years *j* and *i*.  $PersInd_{a,j}$  is an administrator's personality index based on their evaluation in year *j*.  $\Delta Y_{(i,j)}$  is the number of years between evaluations,  $Y_i$  represents fixed effects for evaluation year *i*,  $X_a$  is a set of controls for administrator characteristics, and  $\mu_c$  is a set of indicators for each colony that an administrator was posted in between years *j* and *i*. We also test specifications using administrator fixed effects rather than administrator controls for  $X_a$ .

Given our small sample of first administrators, we look at changes in personality for all administrators in our dataset, covering the 1885-1932 period. Our sample then consists of the full set of administrators for which we have observable data on personality evaluations as well as observable data on hostility reports between evaluation years.

Estimation results are reported in Table 5. While we do observe changes in our personality measure between evaluations, we find no evidence of a statistically significant relationship between hostility and changes in administrators' personality between evaluations. We also test using the contemporaneous personality of an administrator in year *i*,  $PersInd_{a,i}$ , rather than the change in personality as the dependent variable and find similar results, reported in appendix Table A2. This reassures us that it is unlikely that our measure of personality for the first colonial administrators also indirectly reflects contemporaneous hostility while they were posted in districts.

# 6 Results: Colonial Administrators and Hostility Towards the State

## 6.1 First Administrators and Colonial Period Hostility

#### 6.1.1 Personality of First Administrators and Hostility Towards the State

We explore the relationship between the personality of the first civil administrator in a district and the subsequent prevalence of hostility towards the colonial state. If the first administrator of a district, once it has transitioned from military to civilian rule, played a fundamental role in shaping state legitimacy and state capacity in that district, and that administrators with worse personality traits established more conflictual relationships with local populations, then we expect to see a negative relationship between our personality index for the first administrators and colonial hostility. We test this hypothesis using the following estimation approach:

$$Hostility_{d,c} = \alpha + \beta_1 PersIndFirst_{d,c} + X'_{d,c}\Gamma + \mu_c + \varepsilon_{d,c}$$
(3)

where  $Hostility_{d,c}$  is the prevalence of hostility towards the colonial state in district d in colony c over a certain time period after the arrival of the first civilian administrator.  $PersIndFirst_{d,c}$  is the personality index of the first administrator posted in the district.  $X_{d,c}$  is a vector of geographic and historical controls for district d.  $\mu_c$  represents colony fixed effects.

Geographic controls for colonial districts include the latitude and longitude of the main colonial city in the district, total district area, the ruggedness index for the district, the malaria ecology index for the district, the natural log of distance to the closest port, an indicator if the district is on the coast, an indicator if the district features a navigable river, an indicator if the district is on the border of a colony, an indicator for the presence of gold deposits, an indicator for the presence of diamond deposits, and two indicators if the district is in a hot desert or hot semi-arid climate zone. Historical controls include the year of arrival of the first administrator, the population density of the district in 1910, an indicator for the presence of a precolonial kingdom in the district, an indicator for the presence of an acephalous society in district, the year colonial conquest started in the district, the number of years of resistance to colonial conquest in the district, an indicator for the presence of a many society in the district, an indicator for the presence of historical conflicts in 1400-1700, and 27 indicators for the presence ethnic-culture group historical homelands within district boundaries, as well as a measure of ethnic fractionalization in the colonial district<sup>19</sup>.

We first evaluate the impact of administrators on hostility towards the state during the early colonial period in AOF from 1906 to 1919. Results are reported in Table 6. Columns 1 through 4 show OLS results for different sets of controls starting with colony fixed effects and the year of arrival of the first administrator in column 1, then adding geographic controls in column 2, historical controls in column 3, and culture group indicators in column 4. Column 5 reports results using a Post-Double-Selection LASSO correction (Belloni, Chernozhukov and Hansen, 2013, 2014, 2015; Ahrens, Hansen and Schaffer, 2018) with the full set of controls. We observe that the coefficient for personality index is negative and statistically significant across all specifications. The magnitude of the coefficient is smaller for the PDS lasso specification using the full set of controls but remains borderline significant. Supporting our hypothesis, these results indicate that episodes of hostility towards the colonial state were indeed more frequent in districts where the first administrator had worse personality traits, as evaluated by the colonial administration. Taking estimates from column 5, a one standard deviation increase in the personality score of the first administrator is associated with a  $0.02^{20}$  decrease in the prevalence of hostility due to taxes or military recruitment between 1906 and 1919.

We next test this relationship looking at the full colonial period in our sample, as well as different sub-periods. Table 7 reports results for different periods using a PDS lasso specification with the full set of controls. Column one reports results for the full colonial period in our sample, from 1906 to 1956, while column 2 through 4 report results for the periods of 1906-1919, 1923-1939 and 1943-1956 respectively. Overall, we see that the first administrator's personality is negatively correlated with the prevalence of colonial hostility throughout the colonial period. The magnitude of coefficients is also larger for later time periods compared to 1906-1919. Looking at the full time period, moving from the average first administrator to the first administrator with the worse personality score is associated with a close to  $0.11^{21}$  increase in the prevalence of hostility towards the colonial state.

#### 6.1.2 Additional Administrator Characteristics and Hostility

While the personality traits of administrators affected how they interacted with local populations, other personal characteristics may also have influenced their behaviour. We further test our results including additional controls for observable administrator characteristics collected from annual personnel records. We include controls for age and marital status at the time of assignment, an indicator if the administrator was born in Metropolitan France, an indicator if they were born in French colonies, an indicator if they knew at least some basic notions of a local language, an indicator if they received the Legion of Honour at some point during or after their career, an indicator if they had past military experience, indicators for their

<sup>&</sup>lt;sup>19</sup>Appendix Figure A3 illustrates the boundaries of ethnic and culture groups from Murdock's map, overlapped with colonial district borders in 1925. Ethnic fractionalization in the colonial district is calculated as  $Frac_d = 1 - \sum S_{e,d}^2$  for  $S_{e,d}$  the share of the area of culture group e in district d relative to the total area of district d.

 $<sup>^{20}</sup>$ A one standard deviation increase in the personality score of the first administrator is associated with a  $0.792 * (-0.0232) \approx -0.018$  decrease in the proportion of years with reported hostility in the district for the time period.

 $<sup>^{21}</sup>$  Moving from the average administrator with a personality index of 0.007 to the administrator with the worse score of -1.893 is associated with a -1.9 \* -0.0561 = 0.10659

socio-professional background<sup>22</sup>, indicators for education status<sup>23</sup> and indicators if the administrator was trained at the French colonial school (ENFOM)<sup>24</sup>.

Results including administrator characteristics are presented in Table 8. We observe that the size of coefficients for the personality index of the first administrators increases across all time periods once we control for the professional and educational background of administrators. We also observe that past military experience of administrators is positively correlated with hostility. This is consistent with Cohen (1974) who described former military officers as more brutal administrators who tended to be more violent with local populations. This also indicates that administrators with a military past were more likely to leave a legacy of tensions between local populations and the colonial state. Having at least a rudimentary knowledge of a local language, which could seen as be a proxy for administrators which took a greater interest in understanding local populations and adopted a more ethnographic or humanist vision of colonisation, on the other hand, is negatively correlated with hostility towards the colonial state.

Looking at education background, secondary and tertiary education appear to be positively correlated with hostility, which indicates that administrators with a higher level of education established more conflictual relationships relative to administrators with a lower level of education. This is again consistent with Cohen (1974) who described early administrators who were former civil servants in France, and so likely to have achieved higher levels of education, as ill-suited for their colonial posts while administrators who were former assistants in the colonial administrator. We also observe a negative correlation between administrators who studied at ENFOM and hostility, which suggests that individuals who were formally trained in the French colonial school prior to their posting also established less conflictual relationships with local populations.

#### 6.1.3 Control Function Approach

The major empirical concern in regression equations (3) and (7) is the potential bias due to the sorting of administrators into districts. If administrators with good personality evaluations were more likely to be assigned to districts that were less prone to hostility, then the main estimator in equation (3) may be biased away from zero and the results in Table 7 cannot be interpreted as the effect of administrator's personality on hostility. Similarly, this selection bias can question the finding in Table 3 of the very long-run effect of administrators' personality on modern conflicts.

To address this issue, it is important to recall the historical details of the arrival of district administrators in AOF. Cohen (1974) highlights that there was a constant shortage in the pool of potential administrators and, as new districts were created, the vacancies would be filled in a first come, first served basis. Also, because AOF was an undesirable destination for French public servants, only few would choose go there and the flow of administrators who would arrive in AOF and become available to be appointed to new districts was arbitrary, and probably independent of any event or trend in AOF itself during the early colonial period.

We have argued previously that, by focusing on the first administrators, we can avoid the issue of selection by the administrator. Indeed, at the time of the first administrator's appointment, there would be very little known information about the new district (except perhaps its map). As new districts were also created gradually, and without much of a plan, the potential administrators would not have any meaningful choice among the new districts.

On the other side, does the AOF administration, led by the Governor General, select administrators into districts according to a certain way that may undermine our results? Again, given the shortage of candidates for those positions, and that the AOF administration had little control on the arrival of those candidates, the matching between administrators and districts would be completely arbitrary and unrelated to the

 $<sup>^{22}</sup>$ We construct a set of indicators for the socio-professional background of administrators, including: (1) if the administrator was from an advantaged socio-professional background (e.g. upper class professions or students); (2) from a middle-class background (e.g. craftsmen, shopkeepers and entrepreneurs, intermediary occupations); and (3) from a disadvantaged background (e.g. agricultural workers, employees, unemployed). We include an indicator for advantaged socio-professional background and for disadvantaged background in our regressions.

 $<sup>^{23}</sup>$ We construct a set of indicators for the education level of the administrators, including: (1) primary education or less ("Brevet elementaire" or less); (2) completing secondary education ("Baccalaureat" or equivalent); and (3) tertiary education (starting or completing advanced studied). We include an indicator for tertiary education and for secondary education in our regressions.

 $<sup>^{24}</sup>$ We construct two indicators if administrators received training at the French colonial school ENFOM: if they were students at ENFOM or if they were external candidates who studied at ENFOM (external recruitment).

characteristics of neither administrators nor districts. The only possible selection by the AOF administration is that multiple candidates may arrive and become available in Saint-Louis or Dakar, the capitals of AOF, around the same time so that the administration can briefly examine them and assign them selectively.

Under the assumption of this type of selection, we can argue that the selection bias is stronger when there are more potential administrators who arrive in AOF around the same time. Taking the arrival flow of administrators as exogenous, we can thus control for the selection bias with a control function of the number of administrators who arrived and were appointed around the same time, which is arguably excludable from having any direct influence on the district's subsequent hostility and modern conflicts.

To clarify this strategy, let us introduce an unobservable source of selection bias  $U_{d,c}$  into equation (3):

$$Hostility_{d,c} = \alpha + \beta_1 PersIndFirst_{d,c} + X'_{d,c}\Gamma + U_{d,c} + \mu_c + \varepsilon_{d,c}, \tag{4}$$

such that  $U_{d,c}$  is also correlated with  $PersIndFirst_{d,c}$ , so equation (4) does not allow to identify  $\beta_1$  without knowledge of  $U_{d,c}$ .

To address this issue, we first write the unobservable component as:

$$U_{d,c} = \rho_i PersIndFirst_{d,c} + \nu_{d,c},$$

where  $\rho_i$  determines the degree of selection bias due to the correlation between  $PersIndFirst_{d,c}$  and  $U_{d,c}$ , and  $\mathbb{E}[\nu_{d,c}|PersIndFirst_{d,c}] = 0$  (conditional independence of  $\nu$ ). If  $\rho_i$  is a constant parameter, then both  $\beta_1$  and  $\rho_i$  are not identifiable in equation (4).

However, as reasoned above, it is likely that  $\rho_i$  depends on the number of administrators who arrived and were appointed around the same time as administrator *i*. Denote this number  $NumAdm_i$ , we write  $\rho_i = \theta NumAdm_i + \xi_i$ , where  $\mathbb{E}[\xi_i | PersIndFirst_{d,c}] = 0$ . Equation (4) can thus be rewritten as follows:

$$Hostility_{d,c} = \alpha + \beta_1 PersIndFirst_{d,c} + X'_{d,c}\Gamma + \theta NumAdm_i \times PersIndFirst_{d,c} + \mu_c + [\xi_i PersIndFirst_{d,c} + \nu_{d,c} + \varepsilon_{d,c}].$$
(5)

As  $\mathbb{E}[\xi_i PersIndFirst_{d,c} + \nu_{d,c} + \varepsilon_{d,c}|PersIndFirst_{d,c}] = 0$ , we can thus identify  $\beta_1$  in equation (5) by controlling for the control function  $NumAdm_i \times PersIndFirst_{d,c}$ . This is our first, simplest control function approach.

Results for our control function approach, taking the number of first administrators which arrive in AOF within 4 months of each other to generate  $NumAdm_i$ , are reported in Table 9. Overall, coefficients for our personality index remain significant for all time periods, with the exception of 1906-1919. The magnitude of coefficients also increases for all time periods, which suggests that our previous results in Table 7 may be underestimating the impact of the personality of administrators and that, when multiple first administrators arrived in AOF around the same time, administrators with more positive evaluations may have been sent to more difficult districts. We also find similar results when using different time intervals for the arrival of administrators to build  $NumAdm_i$ , reported in appendix Table A8.

More elaborate control functions. It is furthermore possible to explore the exact functional form of the dependence of  $\rho_i$  on  $PersIndFirst_{d,c}$  in a concrete model of sorting between administrator's personality  $Pers_i$  and district's proneness to hostility  $Host_d$ . Suppose both variables are independently and identically normally distributed, the distribution of which can be normalized to  $\mathcal{N}(0, 1)$ . For each value of the number of competing administrators,  $NumAdm_i$ , given two lists of  $\{Pers_i\}_{i=1}^{NumAdm_i}$  and  $\{Host_d\}_{d=1}^{NumAdm_i}$ , sorting consists of matching the best  $Pers_i$  to the best  $Host_d$ , then the second best  $Pers_i$  to the second best  $Host_d$ , and so on.

Then  $\rho_i$  is proportionate to the correlation between the sorted  $Pers_i$  and the sorted  $Host_d$ . The expectation of this correlation is an increasing function of  $NumAdm_i$ : The higher the number of competing administrators, the stronger sorting becomes.

For each value of  $NumAdm_i$ , we run 50,000 simulations of the two lists  $\{Pers_i\}_{i=1}^{NumAdm_i}$  and  $\{Host_d\}_{d=1}^{NumAdm_i}$ , and compute the empirical correlation between the two as  $\rho(NumAdm_i)$ . Writing  $\rho_i = \theta\rho(NumAdm_i) + \xi_i$ , where  $\mathbb{E}[\xi_i|PersIndFirst_{d,c}] = 0$ , we then replace this expression into equation (4) to obtain:

$$Hostility_{d,c} = \alpha + \beta_1 PersIndFirst_{d,c} + X'_{d,c}\Gamma + \theta\rho(NumAdm_i) \times PersIndFirst_{d,c} + \mu_c + [\xi_i PersIndFirst_{d,c} + \nu_{d,c} + \varepsilon_{d,c}],$$
(6)

Again, as  $\mathbb{E}[\xi_i PersIndFirst_{d,c} + \nu_{d,c} + \varepsilon_{d,c}|PersIndFirst_{d,c}] = 0$ , we can thus identify  $\beta_1$  in equation (5) by controlling for the control function  $\rho(NumAdm_i) \times PersIndFirst_{d,c}$ . This is our second control function approach that relies on a more elaborate model of the selection bias.

Results for this simulated control function approach, again taking the number of first administrators which arrive in AOF within 4 months of each other for  $NumAdm_i$ , are reported in Table 10. As before, coefficients for our personality index remain statistically significant and the magnitude of coefficients is higher for all time periods when compared to our previous results in Table 7. We also find similar results when using different time intervals for the arrival of administrators to build  $NumAdm_i$ , reported in appendix Table A9.

#### 6.1.4 Robustness Checks

We further test our results conducting a series of robustness checks, reported in the appendix tables. We might first be concerned that results could be driven by hostility in the Casamance district. Casamance experienced particularly severe hostility towards the colonial state during the early and late colonial periods, with hostility reported for 80% of years surveyed for the 1906-1919 period and 100% of years surveyed for 1943-1956. Estimation results dropping Casamance from our sample, reported in appendix Table A3, indicate that the negative relationship between administrator personality and hostility remains statistically significant when looking at the full colonial period.

Additional concerns might arise from disparities in the length of stay of the first colonial administrators, which varied significantly from less than a month to over nine years. If some administrators were posted for a very short period only, then their influence on local colonial institutions may be more limited. We test our results dropping administrators who stayed less than 6 months from our sample, reported in appendix Table A4. Again, results remain statistically significant, with the exception of results for the late colonial period.

While the first civilian administrator in our sample arrived in 1886, the last one arrived in 1923. As the 1906-1919 period saw the gradual establishment and expansion of the colonial state and its administration under civilian rule, this also corresponds to the time when many of the first district administrators arrived in the colonies. Approximately 25% of the administrators in our sample arrived on or after 1908. We next test our results restricting the sample to administrators that arrived before 1910, reported in appendix Table A5. Dropping later administrators, we find a stronger relationship between administrator personality and colonial hostility in 1906-1919. Coefficients for other time periods are also fairly similar when compared to estimation results for the full sample, with the exception of the late colonial period of 1943-1956 where the coefficient decreases and is no longer significant.

Due to the limited number of administrators in AOF, particularly during the early colonial period, some administrators served as the first administrator in more than one district. A few very large districts which were created during the first years of civil colonial administration were also split into smaller administrative districts during later re-drawing of administrative boundaries which could cause some first administrators to appear twice in our sample using 1925 boundaries of colonial districts. Overall, results largely remain statistically significant when excluding districts which had the same first colonial administrator (either due to subsequent postings or division of districts), reported in Table A6 of the appendix.

Finally, we also test our results breaking our sample into alternative time periods and dropping years with major world events, reported in appendix Table A7. Overall, results remain statistically significant across all specifications tested. Coefficients remain fairly stable when breaking our sample in two time periods for 1906-1929 and 1933-1956, as well as when looking at the full colonial period and dropping years with major French and global events such as the First and Second World Wars, the Front Populaire in France (from 1936 to 1938), and the Great Depression.

## 6.2 Long-term Impacts of Colonial Administrators on Civil Conflicts

#### 6.2.1 First Colonial Administrators and Modern State-based Civil Conflicts

We next examine the long-run effects of colonial administrators on modern day civil conflicts. The positive correlation between colonial hostility and present-day state-based civil conflicts presented in section 3.3 points to a long-term persistence of local hostility towards the state. Having shown that the first colonial administrators had a significant impact on the prevalence of hostility towards the state during the colonial period, we then expect to see a greater incidence of present-day civil conflicts in areas which had administrators with worse personality traits.

We test the reduced-form relationship between the personality of the first colonial administrators and the prevalence of civil conflicts at the cell level using the following estimation model:

$$Conflicts_{g,d,k} = \alpha + \beta_1 PersIndFirst_d + X'_{g,d,k}\Gamma + \mu_k + \varepsilon_{g,d,k}$$
(7)

where  $X_{g,d,k}$  and  $\mu_k$  are defined as before, adding a control for the year the first administrator arrived in district d.

Estimation results are reported in Table 11. Though the size of coefficients is smaller than for those reported for colonial hostility in Table 3, we find a negative and statistically significant relationship between the personality index of the first colonial administrator and the prevalence of modern civil conflicts. We also find similar results when using our measure of intensity of civil conflicts as dependent variable, reported in appendix Table A10. These results support our hypothesis that the first colonial administrator had a long-term influence on local hostility towards the state, taking the form of hostility towards the colonial state during colonial rule and civil conflicts after the Cold War.

We further test our results restricting our sample to cells within a certain distance from the main colonial city in a district. While administrators had the task of visiting every village in their district, colonial presence tended to be concentrated in strategic areas and in the main cities, particularly during the early colonial period when the resources of the state were more limited. Given the limited capacities of the colonial state during the early colonial period and the restricted means of transport and communication available at the time, we may think that the influence of administrators and the state apparatus could have been more concentrated in areas closer to the main colonial city in a district.

Table 12 reports results for the full sample and when restricting the sample to cells within 100km from the main city of a district during the colonial period. Comparing results between the full sample in columns 1 and 2 and those for the restricted sample in columns 3 and 4, we see that the size of coefficients increase and are nearly twice as large for cells within 100km of the colonial main city compared to those for the full sample. Again, we find similar results when looking at our measure of intensity rather than prevalence of civil conflicts, reported in appendix Table A11.

#### 6.2.2 Placebo Test Non-state Conflicts

Finally, we conduct a placebo test looking at the incidence of non-state conflict events from the UCDP-GED dataset. If colonial administrators had a persistent effect on hostility by influencing local attitudes towards the state, and colonial hostility reflected local hostility towards the colonial state rather than local conflicts between groups, then we expect to see a long-term effect of administrators on the incidence of state based conflicts but not on non-state related ones.

Non-state conflict events are defined by UCDP as events which are related to the use of force between two or more organised armed groups, neither of which is the government of a state, and which result in at least 25 battle-related deaths in a year<sup>25</sup>. Since the types of conflict events are related to local tensions, but are not directly related to tensions with the state, then we do not expect to find a significant correlation between administrator personality and non-state conflict events.

Estimation results for the prevalence of non-state conflicts are reported in columns 5 through 8 of Table 12. Results for the intensity of non-state conflicts are also presented in appendix Table A11. Columns 5 and 6 report results for the full sample, while columns 7 and 8 restrict the sample to cells within 100km of the colonial main city. We find no evidence of a statistically significant relationship between the personality index of colonial administrators and the prevalence or intensity of non-state conflicts in any of our estimations. This is consistent with our hypothesis that colonial administrators had a long-term effect on local attitudes and hostility towards the state, and that modern state-based conflicts reflect these lasting tensions rather than local intra-group conflicts.

 $<sup>^{25}</sup>$ See Sunderberg, Eck and Kreutz (2012) and the UCDP Non-State Conflict Codebook (Version 17.1) for definitions and sources used to identify non-state conflict events.

# 7 Concluding Remarks

In this paper, we show the long-term association between hostility towards the colonial state from local populations in French colonies in West Africa at the beginning of the 20th century and modern civil conflicts since 1989. Colonial districts that experienced greater hostility between local peoples and the colonial administration throughout the colonial era ended up with a higher prevalence of modern civil conflicts. We show that this relationship is not fully driven by historical, ethnographic, or geographical factors and find that colonial hostility was affected by the personality of the first colonial district administrators who were assigned rather arbitrarily to those districts.

The first administrators were particularly instrumental in setting out a path that subsequent district leaders followed through until the end of colonialism. This lack of legitimacy and persuasion to govern would result in the historical hostility with respect to the local population, in political attitudes that protest the role of the state in collecting taxes and providing public goods, and eventually in promoting civil conflicts with the modern state.

The findings presented in this paper are useful to call further attention on policies that target the quality of public leaders, especially in crucial moments of state capacity building. It is also important to design policies with the understanding that state capacity can have very long-term effects on development.

# Figures and Tables

# Figure 1: AOF Colonial Boundaries in 1925



Figure 2: Prevalence of Colonial Hostility Due to Taxes or Military Recruitment in 1906-1956 by District



# Figure 3: Location of UCDP-GED Conflict Events in 1989-2016







# Figure 5: Personality Index of First Administrators



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# Table 1: Descriptive Statistics for Colonial Districts

Variable (Cercle level)	Mean	St.dev.	Min	Max	25 <sup>th</sup> percentile	Median	75 <sup>th</sup> percentile	Ν
Prevalence of Colonial Hostility 1906-1956	0.054	0.088	0	0.583	0	0	0.077	110
Prevalence of Colonial Hostility 1906-1919	0.06	0.12	0	0.8	0	0	0.2	110
Prevalence of Colonial Hostility 1923-1939	0.066	0.11	0	0.5	0	0	0.167	110
Prevalence of Colonial Hostility 1943-1956	0.024	0.117	0	1	0	0	0	110
Year of arrival of first Administrator	1902.522	8.191	1886	1923	1897	1901	1908	92
Length of spell of first administrator (in years)	1.44	1.45	0	9.417	0.583	1.042	2.125	92
Latitude of main colonial city in district	11.83	3.729	4.766	20.968	8.926	12.373	14.486	110
Longitude of main colonial city in district	-5.817	6.997	-17.06	12.92	-11.78	-6.11	-1.439	110
District area, in square km	44011.45	86644.73	85	525000	11250	21200	38250	110
In of distance to the closest port	5.79	1.286	0	7.485	5.288	6.124	6.646	110
Ruggedness index	0.293	0.25	0.024	1.133	0.12	0.215	0.375	110
Malaria index	21.018	9.013	0	34.4	17.01	22.315	27.264	110
District on the coast	0.191	0.395	0	1	0	0	0	110
River in the district	0.664	0.475	0	1	0	1	1	110
District at the country border	0.827	0.38	0	1	1	1	1	110
Gold mine in district	0.173	0.38	0	1	0	0	0	110
Diamond mine in district	0.164	0.372	0	1	0	0	0	110
Climate zone type 1901-1925: Hot desert	0.364	0.483	0	1	0	0	1	110
Climate zone type 1901-1925: Hot semi-arid	0.418	0.496	0	1	0	0	1	110
1910 population density	8.522	15.274	0.008	132.691	2.019	4.021	8.515	110
Pre-colonial political structure: kingdom	0.491	0.502	0	1	0	0	1	110
Pre-colonial political structure: acephalous	0.118	0.324	0	1	0	0	0	110
Start year of colonial conquest period	1880.109	13.967	1854	1903	1863	1887	1891	110
Pre-colonial historical conflict in district	0.2	0.402	0	1	0	0	0	110
Fractionalization of culture groups in district	0.242	0.21	0	0.73	0.037	0.203	0.431	110
Colony: Cote D'Ivoire	0.173	0.38	0	1	0	0	0	110
Colony: Dahomey	0.1	0.301	0	1	0	0	0	110
Colony: Guinea	0.164	0.372	0	1	0	0	0	110
Colony: Upper-Volta	0.1	0.301	0	1	0	0	0	110
Colony: Mauritania	0.073	0.261	0	1	0	0	0	110
Colony: Niger	0.091	0.289	0	1	0	0	0	110
Colony: Senegal	0.109	0.313	0	1	0	0	0	110
Colony: Soudan	0 191	0 395	0	1	0	0	0	110

## Table 1:

# Table 2: Descriptive Statistics for Cell-Polygons

Table 2	::
---------	----

Proportion of years with UCDP-GED conflict events         0.004         0.024         0         0.571         0         0         0	2689
Average number of UCDP-GED conflict events in a year         0.008         0.064         0         2.143         0         0         0	2689
Prevalence of Colonial Hostility 1906-1956         0.057         0.082         0         0.583         0         0         0.083	2689
personality_index_inf 0.093 0.783 -1.893 1.772 -0.495 0.114 0.679	955
Colonial district area, in square km         158205.6         188592.3         85         525000         23000         49000         293000	2689
In distance main city in district to the closest port (colonial era) 6.371 1.048 0 7.485 6.111 6.603 7.098	2689
Colonial district on the coast         0.088         0.284         0         1         0         0         0	2689
Navigable river in colonial district 0.525 0.499 0 1 0 1 1	2689
Colonial district touches country border         0.911         0.284         0         1         1         1	2689
Ruggedness index for colonial district         0.218         0.205         0.024         1.133         0.084         0.145         0.269	2689
Malaria index for colonial district         15.565         11.685         0         34.4         1.833         17.469         25.837	2689
1910 population density in colonial district 3.576 7.343 0.008 132.691 0.094 1.472 4.323	2689
Pre-colonial political structure in colonial district: kingdom 0.449 0.497 0 1 0 0 1	2689
Pre-colonial political structure in colonial district: acephalous 0.058 0.233 0 1 0 0 0	2689
Start year of colonial conquest period in colonial district 1882.301 14.237 1854 1903 1879 1887 1891	2689
Length of colonial conquest (in years) for colonial district 28.396 19.448 0 74 15 23 33	2689
Latitude cell polygon 15.316 4.705 4.434 27.126 12.089 15.25 18.75	2689
Longitude cell polygon -3.358 8.194 -17.473 15.703 -9.699 -4.838 2.1	2689
Cell polgyon area 1740.63 1169.112 0 3102.764 497.543 1970.339 2921.383	2689
Ruggedness index for cell polygon 0.202 0.298 0 3.892 0.023 0.073 0.268	2651
Average travel time to nearest city in cell 1023.585 1170.009 51.074 6133.241 253.56 437.716 1490.03	2688
In of cell distance to capital city 6.096 0.867 1.156 7.448 5.519 6.187 6.842	2689
In of cell distance to the border 4.093 1.383 -5.689 6.104 3.321 4.414 5.07	2688
In of cell polygon distance to the coast 13.151 1.153 4.56 14.265 12.785 13.5 13.897	2689
Cell polygon on country boder 0.279 0.448 0 1 0 0 1	2689
Gold mine in cell polygon 0.009 0.092 0 1 0 0 0	2689
Diamond mine in cell polygon 0.012 0.108 0 1 0 0 0	2689
Cell polygon climate zone type 1901-1925: Hot desert 0.555 0.497 0 1 0 1 1	2681
Cell polygon climate zone type 1901-1925: Hot semi-arid 0.16 0.367 0 1 0 0 0	2681
Pre-colonial historical conflict around cell polygon 0.029 0.168 0 1 0 0 0	2689
Fractionalization Index, culture groups 100km buffer around cell         0.219         0.233         0         0.78         0         0.131         0.451	2689
Cell population density in 1990 19.837 70.188 0.013 1416.75 0.33 5.72 19.927	2688
Gross cell product in 1990 0.018 0.042 0 0.376 0 0.004 0.017	2688
Total area (in hectares) in cell equipped for irrigation in 1990 378.937 1368.757 0 14764.77 0 0 42.715	2688
Percentage area of the cell covered by urban area in 1990 0.062 0.291 0 8.69 0 0 0.03	2660
Percentage area of the cell covered by agricultural area in 1990 7.817 14.008 0 93.77 0.01 1.695 8.385	2660
Percentage area of the cell covered by forest area in 1990 3.594 11.527 0 86.52 0 0 0	2660
Country Benin 0.035 0.184 0 1 0 0 0	2689
Country: Burkina Faso 0.071 0.258 0 1 0 0 0	2689
Country: Cote d'Ivoire 0.094 0.292 0 1 0 0 0	2689
Country: Guinea 0.076 0.265 0 1 0 0 0	2689
Country: Mali 0.249 0.432 0 1 0 0 0	2689
Country: Mauritania 0.193 0.395 0 1 0 0 0	2689
Country: Niger 0.22 0.414 0 1 0 0 0	2689
Country: Senegal 0.061 0.239 0 1 0 0 0	2689

# Table 3: Colonial Hostility and Prevalence of Civil Conflicts

	Dependent Variable: Prevalence of UCDP-GED Conflict Events 1989-2016							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Colonial Hactility Provalance Index 1906 1956	0.0764*	0.0000**	0.0006**	0.0410***	0.0260***	0.0/10***	0 0260***	
Clustered s.e. (district level)	(0.046)	(0.0889.1	(0.022)	(0.012)	(0.012)	(0.012)	(0.0369.1.1	
n value	[0.040]	[0.040]	[0.033]	[0.013]	[0.013]	[0.013]	[0.012]	
p-value	[0.100]	[0.026]	[0.014]	[0.002]	[0.004]	[0.001]	[0.003]	
Geographic Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	
Historic Controls	No	No	Yes	Yes	Yes	Yes	Yes	
Culture Group Controls	No	No	No	Yes	Yes	Yes	Yes	
Cell Development Controls	No	No	No	No	Yes	No	Yes	
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	2689	2643	2643	2641	2621	2641	2621	
R-squared	0.0841	0.1414	0.1583	0.2627	0.2695			
Adjusted R-squared	0.0814	0.1322	0.1473	0.2450	0.2501			
Dependent Variable Mean	0.0042	0.0042	0.0042	0.0042	0.0042	0.0042	0.0042	
Dependent Variable Std.Dev.	0.0242	0.0244	0.0244	0.0244	0.0243	0.0244	0.0243	

Table 3:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in columns 6 and 7. The unit of observation is the cell polygon. Dependent variable is proportion of years with UCDP-GED conflict events between 1989 and 2016. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

## Table 4: Balance Checks of the Personality Index of First Administrators and District Characteristics

			Tabl	e 4:					
								Coeff, Controling for	Pval, Controling for
Variables (Cercle level)	Mean	St.dev.	Min	Max	N	Coeff	Pval	Year Frist Admin	Year Frist Admin
Prevalence of Colonial Hostility 1906-1956	0.068	0.102	0	0.583	66				
Prevalence of Colonial Hostility 1906-1919	0.08	0.15	0	0.8	65				
Prevalence of Colonial Hostility 1923-1939	0.078	0.117	0	0.5	66				
Prevalence of Colonial Hostility 1943-1956	0.035	0.145	0	1	66				
Personality Index of First Administrator	0.007	0.792	-1.893	1.772	66				
Year of arrival of first Administrator	1901.258	7.527	1886	1923	66	0.023	0.073*		
Length of first spell of first administrator (in years)	1.499	1.553	0	9.417	66	0.02	0.749	0.017	0.791
latitude of main colonial city in district	10.797	3.225	5.371	16.383	66	0.001	0.973	0.007	0.807
longitude of main colonial city in district	-6.844	5.918	-17.008	2.62	66	0.008	0.643	-0.003	0.853
District area, in square km	20034.24	13611.82	85	56300	66	0	0.09*	0	0.172
In of distance to the closest port	5.489	1.28	0	7.033	66	0.153	0.045**	0.114	0.176
In of distance to Dakar	6.938	0.771	3.802	7.771	66	0.131	0.306	0.031	0.83
In of distance to Saint-Louis	6.887	0.84	3.63	7.752	66	0.088	0.454	-0.015	0.912
District on the coast	0.258	0.441	0	1	66	-0.49	0.027**	-0.389	0.145
Navigable River in the district	0.712	0.456	0	1	66	0.157	0.471	0.148	0.488
District on country border	0.803	0.401	0	1	66	0.04	0.872	0.001	0.997
Presence of gold in district	0.136	0.346	0	1	66	-0.056	0.845	-0.098	0.73
Presence of diamonds in district	0.197	0.401	0	1	66	0.283	0.25	0.161	0.529
District in hot desert climate zone	0.212	0.412	0	1	66	0.1	0.677	0.162	0.498
District in hot semi-arid climate zone	0.379	0.489	0	1	66	0	0.999	0.025	0.9
Ruggedness index	0.336	0.275	0.024	1.133	66	0.251	0.488	0.219	0.537
Malaria index (district average)	23.596	6.762	0	34.4	66	-0.011	0.442	-0.024	0.124
Max value of malaria index in district	28.017	6.322	0	38.081	66	0.006	0.709	-0.003	0.847
Fractionalization index for culture groups in district	0.233	0.218	0	0.694	66	-0.057	0.901	-0.176	0.697
1910 population density	10.715	18.272	0.432	132.691	66	-0.01	0.05*	-0.009	0.084*
Pre-colonial political structure: kingdom	0.455	0.502	0	1	66	-0.064	0.748	-0.007	0.971
Pre-colonial political structure: chiefdoms	0.424	0.498	0	1	66	0.085	0.671	0.081	0.681
Pre-colonial political structure: acephalous	0.121	0.329	0	1	66	-0.046	0.88	-0.178	0.559
Pre-colonial historical conflict in district	0.212	0.412	0	1	66	-0.056	0.817	-0.102	0.668
Start year of colonial conquest period	1878.773	13.598	1854	1894	66	0.016	0.021**	0.014	0.127
Length of colonial conquest (in years)	20.742	11.846	0	55	66	0.004	0.645	0.007	0.42
Final year of colonial conquest period	1899.515	15.423	1858	1930	66	0.015	0.017**	0.013	0.065*
First admin arrives before end of colonial conquest	0.348	0.48	0	1	66	0.438	0.031**	0.425	0.034**
Length of conquest period before first admin (in years)	14.955	9.937	0	38	66	-0.019	0.05*	-0.015	0.155
Colony: Cote D'Ivoire	0.197	0.401	0	1	66	0.241	0.329	0.163	0.512
Colony: Dahomey	0.152	0.361	0	1	66	-0.317	0.247	-0.273	0.312
Colony: Guinea	0.212	0.412	0	1	66	-0.051	0.834	-0.028	0.905
Colony: Upper-Volta	0.121	0.329	0	1	66	0.333	0.268	0.176	0.576
Colony: Senegal	0.152	0.361	0	1	66	0.179	0.515	0.512	0.089*
Colony: Soudan	0.167	0.376	0	1	66	-0.341	0.195	-0.391	0.131

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## Table 5: Prevalence of Hostility and Changes in Administrator Personality

			10010 0.					
		Dependent Variable: Change in Personality Index						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Prevalence of Hostility Between Years of Evaluations	0.0547	-0.0072	0.0781	-0.0014	-0.0756	-0.1190	0.0129	-0.0292
Standard error	(0.156)	(0.140)	(0.160)	(0.137)	(0.335)	(0.221)	(0.328)	(0.209)
p-value	[0.726]	[0.959]	[0.626]	[0.992]	[0.822]	[0.591]	[0.969]	[0.889]
Personality Index of Previous Evaluation		-0.7302***		-0.7799***		-1.0794***		-1.1034***
Standard error		(0.056)		(0.053)		(0.119)		(0.128)
p-value		[0.000]		[0.000]		[0.000]		[0.000]
Number of Years Between Evaluations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Evaluation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Colonie Dummies	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Administrator Controls	No	No	Yes	Yes	No	No	No	No
Administrator Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes
Observations	402	402	402	402	402	402	402	402
R-squared	0.0799	0.3988	0.1144	0.4539	0.7140	0.8694	0.7204	0.8751
Adjusted R-squared	-0.0053	0.3413	-0.0032	0.3796	0.0282	0.5523	-0.0012	0.5487
Dependent Variable Mean	0.0522	0.0522	0.0522	0.0522	0.0522	0.0522	0.0522	0.0522
Dependent Variable Std.Dev.	0.8256	0.8256	0.8256	0.8256	0.8256	0.8256	0.8256	0.8256

Table 5:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Change in personality index is calculated as the difference between the personality index form the administrator evaluation in year *i* and the personality index from the previous observed administrator evaluation in year *j*. Prevalence of hostility between years of evaluations is calculated as the proportion of hostility reported for years between administrator evaluations in years *i* and *j* for each administrator. The personality index of the previous evaluation is the personality index from the administrator evaluation conducted in year *j*. The sample is restricted to the set of administrator evaluations which have observable personality evaluations and observable hostility data in years *i* and *j*. Administrator controls include: age, marrital status, an indicator if born in Metropolitan France, an indicator if born in French colonies, an indicator if knows at least notions of local language, an indicator if recieved the Legion d'Honneur, an indicator for military experience, two indicators for the socio-professional background, two indicators for ENFOM student status. Robust standard errors reported in parentheses. P-values reported in square brackets.

	Table	e 6:							
	Dependent Variable: Colonial Hostility Prevalence Index 1906-1919								
	(1)	(2)	(3)	(4)	(5)				
Personality Index of first administrator	-0.0690***	-0.0692*	-0.0502**	-0.0613**	-0.0232*				
Standard error	(0.024)	(0.035)	(0.022)	(0.028)	(0.014)				
p-value	[0.005]	[0.054]	[0.024]	[0.039]	[0.099]				
Geographic Controls	No	Yes	No	No	Yes				
Historic Controls	No	No	Yes	No	Yes				
Culture Group Controls	No	No	No	Yes	Yes				
Year of First Administrator	Yes	Yes	Yes	Yes	Yes				
Colony FE	Yes	Yes	Yes	Yes	Yes				
Observations	65	65	65	65	65				
R-squared	0.2488	0.3911	0.4793	0.4967					
Adjusted R-squared	0.1565	0.1143	0.3465	0.0526					
Dependent Variable Mean	0.0803	0.0803	0.0803	0.0803	0.0803				
Dependent Variable Std.Dev.	0.1498	0.1498	0.1498	0.1498	0.1498				

# Table 6: Administrator Personality and Prevalence of Hostility in the Early Colonial Period

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Robust standard errors reported in parentheses. P-values reported in square brackets. PDS Lasso estimates reported in column 5.

	Table 7:							
	Dependent	Variable: Coloni	al Hostility Preva	lence Index				
	1906-1956 1906-1919 1923-1939 1943-							
	(1)	(2)	(3)	(4)				
Personality Index of first Administrator	-0.0561***	-0.0232*	-0.0638***	-0.0510***				
Standard error	(0.012)	(0.014)	(0.019)	(0.016)				
p-value	[0.000]	[0.099]	[0.001]	[0.001]				
Geographic Controls	Yes	Yes	Yes	Yes				
Historic Controls	Yes	Yes	Yes	Yes				
Culture Group Controls	Yes	Yes	Yes	Yes				
Year of First Administrator	Yes	Yes	Yes	Yes				
Colony FE	Yes	Yes	Yes	Yes				
Observations	66	65	66	66				
R-squared								
Adjusted R-squared								
Dependent Variable Mean	0.0681	0.0803	0.0783	0.0354				
Dependent Variable Std.Dev.	0.1019	0.1498	0.1170	0.1448				

Table 7: Administrator Personality and Prevalence of Hostility for Different Colonial Periods

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard

errors reported in parentheses. P-values reported in square brackets.

 Table 8: Administrator Personality and Prevalence of Hostility, Controlling for Administrator

 Characteristics

	Table 8:			
	Dependent	: Variable: Coloni	al Hostility Preva	lence Index
	1906-1956	1906-1919	1923-1939	1943-1956
	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0.1563***	-0.1350***	-0.1339***	-0.1271***
Standard error	(0.007)	(0.034)	(0.007)	(0.008)
p-value	[0 000]	[0 000]	[0 000]	[0 000]
Military experience	0.0487**	0 2367***	0.0820***	-0 2577***
Standard error	(0.021)	(0.051)	(0.028)	(0.031)
p-value	[0 023]	[0 000]	[0 004]	[0 000]
Knows at least notions of a local language	-0.1750***	-0.2397***	-0.1447***	-0.1469***
Standard error	(0.011)	(0.022)	(0.011)	(0.015)
p-value	[0.000]	[0.000]	[0.000]	[0.000]
Studied at ENFOM	-0.1741***	-0.2202***	-0.1884***	-0.1443***
Standard error	(0.009)	(0.028)	(0.011)	(0.016)
p-value	[0.000]	[0.000]	[0.000]	[0.000]
Education: tertiary education	0.2185***	0.3234***	0.0151	0.3910***
Standard error	(0.012)	(0.042)	(0.014)	(0.014)
p-value	[0.000]	[0.000]	[0.281]	[0.000]
Education: Completed secondary education (Baccalaureat)	0.1726***	0.1169**	0.0808***	0.3687***
Standard error	(0.014)	(0.048)	(0.019)	(0.017)
p-value	[0.000]	[0.016]	[0.000]	[0.000]
Administrator Characteristics Controls	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes
Historic Controls	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes
Year of First Administrator	Yes	Yes	Yes	Yes
Colony FE	Yes	Yes	Yes	Yes
Observations	62	61	62	62
R-squared				
Adjusted R-squared				
Dependent Variable Mean	0.0653	0.0757	0.0753	0.0376
Dependent Variable Std.Dev.	0.1034	0.1475	0.1187	0.1491

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Administrator controls include: age, marital status, an indicator if born in Metropolitan France, an indicator if born in French colonies, an indicator if knows at least notions of local language, an indicator if received the Legion d'Honneur, an indicator for military experience, two indicators for the socio-professional background, two indicators for education status and two indicators for ENFOM student status. Robust standard errors reported in parentheses. P-values reported in square brackets. Robust standard errors reported in parentheses. P-values reported in square brackets.

	Table 9:			
	Dependent	Variable: Coloni	al Hostility Preva	lence Index
	1906-1956	1906-1919	1923-1939	1943-1956
	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0.0876***	-0.0346	-0.1079***	-0.0913***
Standard error	(0.025)	(0.025)	(0.036)	(0.031)
p-value	[0.000]	[0.161]	[0.003]	[0.003]
Personality Index * Latent Correlation	0.0108*	0.0036	0.0151	0.0138*
Standard error	(0.006)	(0.006)	(0.010)	(0.008)
p-value	[0.086]	[0.583]	[0.123]	[0.069]
Geographic Controls	Yes	Yes	Yes	Yes
Historic Controls	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes
Year of First Administrator	Yes	Yes	Yes	Yes
Colony FE	Yes	Yes	Yes	Yes
Observations	66	65	66	66
R-squared				
Adjusted R-squared				
Dependent Variable Mean	0.0681	0.0736	0.0783	0.0354
Dependent Variable Std.Dev.	0.1019	0.1417	0.1170	0.1448

Table 9: Administrator Personality and Prevalence of Hostility, Simple Control Function

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard errors reported in parentheses. P-values reported in square brackets.

 
 Table 10: Administrator Personality and Prevalence of Hostility, Simulated Correlation Control Function

	Table 10.			
	Dependent	Variable: Coloni	al Hostility Preva	lence Index
	1906-1956	1906-1919	1923-1939	1943-1956
	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0.1828***	-0.1057**	-0.2357***	-0.1735***
Standard error	(0.049)	(0.053)	(0.083)	(0.065)
p-value	[0.000]	[0.045]	[0.005]	[0.008]
Personality Index * Latent Correlation	0.2866***	0.1777	0.3889**	0.2771**
Standard error	(0.098)	(0.111)	(0.173)	(0.131)
p-value	[0.004]	[0.109]	[0.025]	[0.035]
Geographic Controls	Yes	Yes	Yes	Yes
Historic Controls	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes
Year of First Administrator	Yes	Yes	Yes	Yes
Colony FE	Yes	Yes	Yes	Yes
Observations	66	65	66	66
R-squared				
Adjusted R-squared				
Dependent Variable Mean	0.0681	0.0731	0.0783	0.0354
Dependent Variable Std.Dev.	0.1019	0.143	0.117	0.1448

Table 10:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard errors reported in parentheses. P-values reported in square brackets.

## Table 11: Administrator Personality Index and Prevalence of Modern Civil Conflicts

		Dependent Variable: Prevalence of UCDP-GED Conflict Events 1989-2016							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Personality Index of first administrator	-0.0021	-0.0060*	-0.0066*	-0.0034*	-0.0037**	-0.0034*	-0.0037**		
Clustered s.e. (district level)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)		
p-value	[0.483]	[0.079]	[0.055]	[0.089]	[0.042]	[0.073]	[0.031]		
Geographic Controls	No	Yes	Yes	Yes	Yes	Yes	Yes		
Historic Controls	No	No	Yes	Yes	Yes	Yes	Yes		
Culture Group Controls	No	No	No	Yes	Yes	Yes	Yes		
Cell Development Controls	No	No	No	No	Yes	No	Yes		
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	955	941	941	941	930	941	930		
R-squared	0.0387	0.1986	0.2410	0.4196	0.4286				
Adjusted R-squared	0.0295	0.1730	0.2117	0.3814	0.3863				
Dependent Variable Mean	0.0046	0.0047	0.0047	0.0047	0.0046	0.0047	0.0046		
Dependent Variable Std.Dev.	0.0315	0.0318	0.0318	0.0318	0.0314	0.0318	0.0314		

Table 11:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in columns 6 and 7. The unit of observation is the cell polygon. Dependent variable is proportion of years with UCDP-GED conflict events between 1989 and 2016. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

Table 12: Administrator Personality Index and Prevalence of Civil Conflicts and Non-State Conflicts for the Full Sample and Restricted Sample of Cells with 100km of Colonial Main Cities

Table	12:	

	Dependent Variable: Prevalence of UCDP-GED Conflict Events 1989-2016				Dependent Variable: Prevalence of UCDP-GED Non-State Conflict Events 1989-2016			
	Cells Within Cells Within full sample full sample Colonial Main City City		full sample	full sample	Cells Within 100km of Colonial Main City	Cells Within 100km of Colonial Main City		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Personality Index of first administrator Clustered s.e. (district level) p-value	-0.0034* (0.002) [0.089]	-0.0037** (0.002) [0.042]	-0.0062* (0.003) [0.051]	-0.0063** (0.003) [0.042]	0.0006 (0.000) [0.217]	0.0004 (0.000) [0.294]	0.0007 (0.001) [0.241]	0.0005 (0.001) [0.315]
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cell Development Controls	No	Yes	No	Yes	No	Yes	No	Yes
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	941	930	658	648	941	930	658	648
R-squared	0.4196	0.4286	0.4581	0.4831	0.1299	0.1733	0.1754	0.2238
Adjusted R-squared	0.3814	0.3863	0.4066	0.4273	0.0727	0.1121	0.0970	0.1401
Dependent Variable Mean	0.0047	0.0046	0.0051	0.0052	0.0008	0.0008	0.0011	0.0012
Dependent Variable Std.Dev.	0.0318	0.0314	0.0356	0.0359	0.0080	0.0081	0.0095	0.0096

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The unit of observation is the cell polygon. Dependent variable in columns 1 through 4 is the proportion of years with UCDP-GED conflict events between 1989 and 2016. Dependent variable in columns 5 though 8 is is the proportion of years with UCDP-GED non-state conflict events between 1989 and 2016. Columns 3, 4, 7 and 8 restrict the sample to cells with centroids within a 100km from the main city during colonization period in colonial district in which they fall. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

# Data Appendix

## Data on Colonial Administrators:

We construct a novel spell database and administrator characteristics database covering civil administrators posted in colonies in French West Africa from 1885 to 1932.

#### Spell database:

We matched district-administrator data over the period to identify which administrators should be sampled. For this, we collected all transitions of district administrators using nominations in the Official Journals of the colonies ("Journaux Officiels", JO henceforth) to identify service periods. Data was collected for the colonies of Senegal, Guinea, Ivory Coast, Dahomey, Upper Volta and French Sudan. The districts of Mauritania and Niger were excluded as no exhaustive information on posting periods could be gathered from the JO. Overall, we can identify 3 279 spells over the period, which corresponds to nearly all the spells for the sampled colonies between 1885 and 1932.

We completed the identification of administrators using the Bibliographic Dictionary of ENFOM pupils to identify all the administrators who graduated from the Colonial School, and by consulting personnel records at ANOM to confirm our matching of administrators and spells. This was necessary since nominations in the JO do not systematically provide enough information to identify administrators (e.g. sometimes only giving their last name). From the identified administrators' personnel records, we could confirm that: (i) the first and last names matched with the spells database, (ii) he was indeed a district administrator; (iii) his career period was consistent with the spells we have identified him with; (iv) he served in the colonies corresponding to the matched districts; and (v) the military status matched what was observed in the JO.

Several changes in the administrative boundaries and names of colonial districts occurred over the period. To overcome this issue, we use the 1925 map of administrative boundaries as our reference for colonial districts. For each year in the dataset, we matched the observed districts to the reference 1925 districts by reconstructing the evolution of districts over time using historical sources, and by relying on detailed colonial maps available at IGN for the years 1911, 1922, 1928 and 1935, and using a colonial map of 1925 from Gallica, the digital repository of the French National Library, as reference. These maps detail the limits of all the districts, list their major towns, surface area and census population. We relied on the fact that many districts for which we could not document the evolution were often small towns that we could locate on the map.

Spell duration was calculated using the spell database (using nomination as start date and end date whenever it was mentioned or bounding the end date by other nominations). We further refined the duration using information from the administrators' personnel records. In the end, we were able to recover most of the start and end dates and measure the observed spell duration.

#### Administrator characteristics:

Using the newly constructed spell database, we were able to identify the relevant administrators for our sample and collect information on their characteristics from their annual personnel records at ANOM. We focused on records from their service period in our sample, as well as their first records, as they usually contained more detailed information about previous experience. We could observe the following information: education, military experience, personality assessment by the hierarchy, honours, age, marital status, experience in the administration. We were able to collect characteristics from personnel records for 742 administrators (70.6% of administrators).

Personality assessments were collected from annual assessments of the administrator by his hierarchy on the following criteria: behaviour, morality, temperament, relationship with superiors/equals/subordinates, conduct, capacity, health. We code these assessments as either Negative, Neutral, Good or Very good with respective values -1, 0, 1 and 2. The asymmetry in assessments comes from the fact that none of the comments are extremely negative. We use these assessments to construct an administrator index which is the average of these assessments over all available years and all dimensions. We use the administrator index on the first administrator for each district as this first assignment is arguably more random than subsequent allocations. The first administrator is defined as the first administrator nominated after the district becomes civil (dated using annual budget collected by Huillery (2009)). We do not use the first administrator observed in the spell database as some of these early nominations are military administrators before the district is pacified.

We further identify administrators involved in ethnography using Sibeud (1999) and de Suremain (2001) who listed major actors involved in Africanism over 1870–1960. Their list is completed by a semantic search from the "Renseignements Coloniaux" — a monthly supplement to the journal "Bulletin du Comité de lAfrique française" — which contained from 1909 a systematic review of all the publications in the field of ethnography in France or abroad (Sibeud, 1994). We used all the available supplements from 1906–1922. We identified in total 44 such ethnographers defined as administrators in AOF with at least one publication in the field of ethnography.

#### Measure of Colonial Period Hostility:

Measures of hostility towards the colonial state are generated from data on political violence collected by Elise Huillery (2011) from annual political reports ("Rapports Politiques Annuels") written by each colony's (local) Governor to the AOF's (federal) Governor. The collection of Annual Political Reports to the Governor are accessible from the French National Archives, filed under "Afrique Occidentale Française, serie G, sous-serie 2". This dataset compiled by Huillery (2011) includes observations for all years ending in 3, 6 or 9, starting in 1906 and ending in 1956 (e.g. for 1906-1919 period: 1906, 1909, 1913, 1916 and 1919).

For each year observed, reports of hostility towards the colonial power are recorded and coded based on the source of hostility. Recorded sources of hostility include: (i) general hostility towards the colonial power; (ii) hostility towards the colonial power related to taxes; (iii) hostility towards the colonial power related to land property rights due to colonial borders; (iv) hostility towards the colonial power related to land property rights; (v) hostility towards the colonial power related to military recruitment. Reported hostility for each source are classified as categorical variables based on the level of threat indicated by the colonial authorities in their reports: 0= nothing happened; 1= insignificant event, 2= significant event happened without threatening the colonial power; 3= event threatening the colonial power happened, 4= major threat to the colonial power happened.

We focus on reports of hostility towards colonial rule due to taxes or military recruitment which were recorded as a threat or a major threat to colonial power. Sources of hostility due to taxes or military recruitment include reports of hostility coded as: (i) Chiefs exhibit hostility towards the colonial power related to taxes; (ii) Subjects exhibit hostility towards the colonial power related to taxes; (iii) Chiefs exhibit hostility towards the colonial power related to military recruitment; (iv) Subjects exhibit hostility towards the colonial power related to military recruitment; (v) One of few subjects exhibit hostility towards the colonial power related to military recruitment.

Our index of hostility towards the colonial state is calculated as the proportion of years with non-zero reported of important (category 3 or 4) episodes of hostility due to taxes or military recruitment over a given time period.

## Measures of Contemporary Conflicts:

Data on conflict events are taken from the UCDP-GED v17.1 version of the Uppsala Conflict Data Program Georeferenced Event Dataset (UCDP-GED), collected by the Uppsala Conflict Data Program at the University of Uppsala. This dataset includes georeferenced events of individual incidents of lethal violence connected to an UCDP/PRIO Armed Conflict, a UCDP Non-State Conflict or a UCDP One-Sided Violence instance. Events in the UCDP-GED v17.1 version include all georeferenced events between 1989 and 2016.

UCDP-GED defines an event as: "An incident where armed force was by an organised actor against another organized actor, or against civilians, resulting in at least 1 direct death at a specific location and a specific date"  $^{26}$ .

UCDP-GED civil conflict events for AOF countries are taken as events coded as state-based events in the UCDP-GED dataset (all state based events in AOF countries for the time period correspond to intra-state events) and matched with the UCDP-PRIO Armed Conflicts dataset, collected by the Uppsala Conflict Data

<sup>&</sup>lt;sup>26</sup>M Croicu and R Sundberg, 2017, "UCDP GED Codebook version 17.1", Department of Peace and Conflict Research, Uppsala University. Data presentation article: R Sundberg and E Melander, 2013, "Introducing the UCDP Georeferenced Event Dataset", Journal of Peace Research, vol.50, no.4, 523-532.

Program and the Peace Research Institute Oslo. Armed conflicts are defined as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a calendar year"<sup>27</sup>.

We take two different measures of UCDP-GED civil conflict events over the 1989-2016 period:

- The prevalence of UCDP-GED civil conflict events: defined as total number of years with at least 1 identified UCDP-GED civil conflict event in a cell polygon, divided by total number of years observed.
- The intensity of UCDPGED events: defined as the average number of events per year in a cell polygon (sum of total number of events each year in polygon, divided by total number of years observed).

# Sample Construction for Estimations Using Modern Civil Conflicts as Dependent Variable:

We combine colonial period data at the district level with georeferenced data and geographic data at the 0.5x0.5 degree grid-cell level (defined as 0.5x0.5 degrees latitude and longitude) to generate a dataset of cell polygons such that each observed cell polygon falls within one grid-cell, one colonial period district and one country.

Cell polygons are generated by taking the intersection of 0.5x0.5 degree grid-cell, as used in the PRIO-GRID datasets compiled by the Peace Research Institute Oslo, with a digitalised map of colonial district boundaries in 1925 from Huillery (2009) and present-day country borders from GAUL 2005 (compiled by the FAO). Grid-cells that fall on the border between two or more countries and/or two administrative districts are split into two or more cell-polygons such that each cell-polygon is uniquely matched to one grid-cell, one colonial district and one country. Georeferenced data are then matched to polygons based on their coordinates.

### Additional Historic and Geographic Controls:

Data on the geographical and precolonial characteristics of colonial districts are taken from Huillery (2009). Geographical characteristics include the land area of the district, the latitude and longitude of the main colonial city in the district in 1925, indicators for access to sea and access to a navigable ("important") river, and distance from the main colonial city in the district to the nearest port. Data are collected using a 1925 colonial map available from the Documentation Française and manually computing distances.

Precolonial characteristics are collected by Huillery (2009) using historian sources. Data on colonial conquest include the years of resistance to colonial rule in the district, the years of beginning and ending of conquest in the district, and the first peace treaty with local chiefs and first military posts.

To measure precolonial political development, we follow Huillery (2011) which uses direct information from anthropologists and historians (Morrison, Mitchell and Paden, 1989; Murdock 1967; Barrett, 1968; Englebert,2000). We distinguish three pre-colonial political statuses: kingdoms or empires, chiefdoms, and amorphous areas. We do not use the index of state-like nature of pre-colonial systems used in Englebert (2000) as this index is at the national level. As we need more precise information at the district level, we rely on evidence from historians (Adu Boahen, 1989; Bouche,1991; Coquery-Vidrovitch and Moniot, 1993; Ki-Zerbo, 1978). The time period in which pre-colonial political structure is observed is 1850-1880. There is a strong consensus within these historical sources on the location of pre-colonial kingdoms, chiefdoms, and amorphous areas. Appendix 2 in Huillery (2011) shows districts affected to the kingdom category, the name of the kingdom, and the historical sources that allowed to construct these data. A district was affected to the "kingdom" category as soon as a kingdom existed on the main part of the area over 1850-1880, based on description and maps of pre-colonial kingdoms (Sellier, 2003). Approximately half of the districts were part of kingdoms from before colonial rule, and 13 districts were part of completely amorphous areas.

We further complement our dataset with georeferenced historic and geographic controls which may also be correlated with hostility and civil conflicts, including controlling for the historical homelands of ethnic groups, historical conflicts, access to strategic resources and local geographic characteristics.

<sup>&</sup>lt;sup>27</sup>Uppsala Conflict Data Program and International Peace Research Institute, 2017, "UCDP/PRIO Armed Conflict Dataset Codebook version 17.1". Data presentation article: M Allansson, E Melander and L Themnér, 2017, "Organized violence, 1989-2016", Journal of Peace Research, vol.54, no.4.

To control for potential colonial and post-colonial tensions between ethnic groups and the state in particular areas, we generate a set of control for the presence of culture groups. Geographical data on the location of ethnic homelands are generated from digitalised maps from Murdock (1959) which show the historical borders of ethnic groups during the nineteenth century. We use data from the Murdock HRAF 1959 map, linked to the Human Relations Area Files database housed at Yale University, to generate areas for the historical homelands of main culture groups, as defined by the Human Relations Area Files. This generates areas for 27 culture groups present in AOF countries, which we then match with the boundaries of colonial districts and cell-polygons (see Appendix Figure A3 for a map of culture group homelands and colonial districts).

Besley and Reynal-Querol (2014) also showed that pre-colonial conflicts correlated with post-colonial conflicts, with areas which featured large recorded historical conflicts also exhibiting a higher incidence of conflicts today. To control for the presence of historical conflicts, we match georeferenced data on historical conflicts between 1400 and 1700 from Besley and Reynal-Querol (2014) with colonial district boundaries and cell-polygons.

To control for the presence of strategic resources and geographic characteristics, we match our dataset with georeferenced data on the location diamond mines and gold mines, and generate measures of terrain ruggedness, malaria ecology and climate zones. The location of gold mines and diamond mines are taken from the US Geologicap Survey Mineral Resources Data System and then DIADATA dataset for diamond resources, prepared by Gilmore, Lujala, Gleditsch and Rod at the Centre for the Study of Civil War, PRIO. We calculate terrain ruggedness at the colonial district level and the cell-polygon level using data from Nunn and Puga (2012). Similarly, we generate a malaria ecology index at the colonial district and cell-polygon level using data from digitalised maps of malaria ecology from Kiszewski et al. (2004). Data on climate zones are taken from world maps of the Köppen-Geiger climate classification for the 1901-1925 time period developed by Rubel and Kottek (2010), available from the Climate Change and Infectious Diseases Group of Institute for Veterinary Public Health at University of Veterinary Medicine Vienna.

In certain cases, when evaluating the relationship between administrators, colonial hostility, and modern civil conflicts, we also include a set of development controls at the grid-cell level using data from the PRIO-GRID V2.0 dataset developed by the Peace Research Institute Oslo. These include the mean travel time in the cell to the nearest major city, the natural log of distance to the closest land-contiguous neighbouring country, the grid-cell population density in 1990, the gross cell product in 1990, and total land area, in hectares, equipped with irrigation in 1990, as well as the percentage of cell areas covered by urban zones, agricultural land and forests.

## Controls for Cercle Level Regressions:

Administrator spell controls:

• Year of arrival of first administrator: year that the first administrator was appointed to the colonial district. Source: Archival sources; Journaux Officiels.

#### Historical controls:

- Population density in colonial district in 1910: calculated by dividing total Indigenous and European population in 1910 by total land area of colonial district. When population data were missing for 1910, values for 1925 were used instead (closest available year of complete population data). Source: Huillery (2009).
- Indicator for the presence of a pre-colonial kingdom in colonial district: an indicator of a kingdom at the end of the nineteenth century. Source: Huillery (2009).
- Indicator for the presence of a pre-colonial acephalous society in colonial district: an indicator of an acephalous society before colonial conquest. Source: Huillery (2009).
- Indicator for pre-colonial historical conflict in colonial district: an indicator variable for presence of historical conflicts during pre-colonial period between 1400 and 1700. Source: Besley and Reynal-Querol (2014).

- Start of colonial conquest: year of the beginning of colonial conquest in the district. Source: Huillery (2009).
- Length of colonial conquest: the number of years of resistance to French colonial conquest in the district. Source: Huillery (2009).

## Geographic controls:

- Latitude of the main colonial city in the district: coordinates of main city in colonial district during colonial period; latitude. Source: Huillery (2009).
- Longitude of the main colonial city in the district: coordinates of main city in colonial district during colonial period; longitude. Source: Huillery (2009).
- Area of colonial district: area in square kilometers of colonial district. Source: Huillery (2009).
- Log of distance to the closest port: natural log of distance of the main city in the colonial district to the nearest port, in kilometers. Source: Huillery (2009).
- Indicator for colonial district on the coast: an indicator if the colonial district has a direct access to the sea. Source: Huillery (2009).
- Indicator for river in the district: an indicator for the presence of a navigable river in colonial district. Source: Huillery (2009).
- Ruggedness index for colonial district: ruggedness index calculated for the colonial district following the approach proposed by Nunn and Puga (2012). Source: Ruggedness data from Nunn and Puga (2012), matched with a digitalised map of colonial district boundaries in 1925.
- Malaria index for the colonial district: average malaria index for colonial district. Source: Shapefiles for malaria index from Gordon C. McCord (sites.google.com/ site/gordoncmccord/datasets), using information from Kiszewski et al (2004), matched with a digitalised map of colonial district boundaries in 1925.
- Indicator for colonial district at the country border: an indicator if the colonial district touches a modern-day land border. Source: Country boundaries from GAUL 2005.
- Indicator for presence of gold deposits in the colonial district: an indicator if a gold mine was ever active in the colonial district at any point in time. Source: geolocation of gold mines from USGS MRDS US Geologicap Survey Mineral Resources Data System.
- Indicator for presence of diamond deposits in the colonial district: an indicator if a diamond mine was ever active in the colonial district at any point in time. Source: geolocation of diamond mines from DIADATA dataset for diamond resources, Gilmore, Lujala, Nils Gleditsch and Rod, Centre for the Study of Civil War, PRIO.
- Indicator for hot desert climate zone: an indicator if any part of the colonial district falls in a "Hot desert" Köppen-Geiger climate zone, for climate zone boundaries during the 1901-1925 time period. Source: datasets on Köppen Geiger climate zones from the Climate Change and Infectious Diseases Group, Institute for Veterinary Public Health, University of Veterinary Medicine Vienna. Data on climate zones are taken from world maps of the Köppen-Geiger climate classification for the 1901-1925 time period developed by Rubel and Kottek (2010).
- Indicator for hot semi-arid climate zone: an indicator if any part of the colonial district falls in a "Hot semi-arid" Köppen-Geiger climate zone during the 1901-1925 time period. Source: datasets on Köppen Geiger climate zones from the Climate Change and Infectious Diseases Group, Institute for Veterinary Public Health, University of Veterinary Medicine Vienna.

Culture group controls:

- Fractionalization of culture groups in the colonial district: Fractionalization of culture groups in colonial district calculated following the approach proposed by Alesina et al (2003) but using the proportion of area of each culture group in a colonial district rather than population. The area of each culture group are calculated using the "Tribal Map of Africa" from George Murdock (1959) (digitalised by Nathan Nunn) and matched with the Human Relations Area Files database housed at Yale University (matched with the HRAF by Suzanne Blier and Julia Finkelstien). Ethnic fractionalization is calculated as  $Frac_d = 1 \sum S_{e,d}^2$  for  $S_{e,d}$  the share of area of culture group e relative to the total area of district d. Source: Murdock HRAF 1959 v2 shapefile, Center for Geographic Analysis at Harvard University, matched with a digitalised map of colonial district boundaries in 1925.
- Indicators for the presence of culture groups in the colonial district: indicator variables for the presence of 27 ethnic culture-group homelands in the colonial district. The 27 culture groups include: Akan; Arabs, Bedoin; Berbers, Moroccan; Borgu-Mango; Bornu; Ewe-Fon; Fulani, Sedentary; Grusi; Guinea; Habe; Hausa; Jos Plateau; Kru; Lobi; Mande, Nuclear; Mande, Southern; Marka; Mende-Temne; Mole; Niger, Fisherman; Nupe-Idoma; Senegal; Senufo; Songhai; Teda; Tuareg; Yoruba. Source: Murdock HRAF 1959 shapefile, available from the Center for Geographic Analysis at Harvard University.

#### Colony fixed effects:

• Fixed effects for 8 colonies in the AOF dataset (Mauritania and Niger are excluded for regressions with the personality index of administrators). The 8 colonies include: Dahomey (present day Benin); Upper-Volta (present day Burkina Faso); Cote d'Ivoire; Guinea; French Soudan (present day Mali); Mauritania; Niger; Senegal. Source: Map of colonial district borders in 1925 from Gallica.

#### Controls for Cell-Polygon Level Regressions:

#### Geographic controls:

- Latitude of the main colonial city in district: coordinates of the main colonial city in the district during colonial period; latitude. Source: Huillery (2009).
- Longitude of the main colonial city in district: coordinates of the main city in colonial district during colonial period; longitude. Source: Huillery (2009).
- Total Area of the colonial district: area in square kilometers of the colonial district. Source: Huillery (2009).
- Log of the distance to the closest port: natural log of distance from the main colonial city in the district to the nearest port during the colonial period, in kilometers. Source: Huillery (2009).
- Indicator for colonial district on the coast: an indicator if the colonial district has a direct access to the sea. Source: Huillery (2009).
- Indicator for river in the district: an indicator for presence of a navigable river in the colonial district. Source: Huillery (2009).
- Ruggedness index for the colonial district: ruggedness index calculated for the colonial district, following the approach used by Nunn and Puga (2012). Source: Ruggedness data from Nunn and Puga (2012)
- Malaria index for the colonial district: average malaria index for colonial district. Source: Shapefiles for malaria index from Gordon C. McCord (sites.google.com/ site/gordoncmccord/datasets), using information from Kiszewski et al (2004).
- Indicator for colonial district at the country border: an indicator if the colonial district touches a modern day land border. Source: Country boundaries from GAUL 2005

- Latitude of cell-polygon centroid: coordinates of cell-polygon centroid; latitude. Source: Calculated by taking the centroid of the intersection between grid-cells from PRIO v2 and colonial district boundaries.
- Longitude of cell-polygon centroid: coordinates of cell polygon centroid; longitude. Source: Calculated by taking the centroid of intersection between grid-cells from PRIO v2 and colonial district boundaries.
- Indicator for cell-polygon at the country border: an indicator if the cell-polygon touches a modern day land border. Source: Country boundaries from GAUL 2005.
- Cell polygon area: total area of cell-polygon, in square kilometers. Source: Calculated by taking area of polygons generated by the intersection between grid-cells from PRIO v2 and colonial district boundaries. Areas are calculated using an Africa Albers Equal Area projection.
- Ruggedness index for cell polygon: ruggedness index calculated for the cell-polygon following the approach used by Nunn and Puga (2012). Source: Ruggedness data from Nunn and Puga (2012).
- Average travel time to the nearest major city: average travel time to the nearest major city for the Prio-grid cell. Source: PRIO-GRID v.2.0.
- Log of distance to capital city: natural log of the distance from the cell-polygon centroid to the countrys administrative capital city, in kilometers. Source: calculated using latitude and longitude of cell centroids and latitude and longitude of national capitals.
- Log of distance to the border: natural log of the distance of the prio-grid cell centroid to the nearest land-contiguous neighboring country in 1990, measured as spherical distance in kilometers. Source: PRIO-GRID v.2.0.
- Log of distance to the colonial main city: natural log of the distance of cell-polygon centroid to the colonial period main city in the colonial district. Source: calculated using latitude and longitude of cell centroids and latitude and longitude of the colonial district main city from Huillery (2009).
- Log distance to the coast: natural log of the distance of the cell-polygon centroid to the coast. Source: calculated using cell-polygon centroids and coast line data from Global Self-consistent Hierarchical High-resolution Geography (GSHHG). Distances are calculated using an Africa Albers Equal Area projection.
- Indicator for the presence of a gold mine in the cell-polygon: an indicator if a gold mine was ever active in the cell polygon. Source: geolocation of gold mines from USGS MRDS US Geologicap Survey Mineral Resources Data System.
- Indicator for presence of a diamond mine in the cell-polygon: an indicator if a diamond mine was ever active in the cell-polygon. Source: geolocation of diamond mines from DIADATA dataset for diamond resources, Gilmore, Lujala, Gleditsch and Rod, Centre for the Study of Civil War, PRIO.
- Indicator for hot desert climate zone: an indicator if the cell-polygon falls in a "Hot desert" Köppen-Geiger climate zone during the 1901-1925 time period. Source: datasets on Köppen Geiger climate zones from the Climate Change and Infectious Diseases Group, Institute for Veterinary Public Health, University of Veterinary Medicine Vienna.
- Indicator for hot semi-arid climate zone: an indicator if the cell-polygon falls in a "Hot semi-arid" Köppen-Geiger climate zone during the 1901-1925 time period. Source: datasets on Köppen Geiger climate zones from the Climate Change and Infectious Diseases Group, Institute for Veterinary Public Health, University of Veterinary Medicine Vienna.

## Historical controls:

• Year of arrival of first administrator: year that the first administrator was appointed to the colonial district (included for regressions with the personality index of the first administrator). Source: Archival sources; Journaux Officiels.

- Population density in the colonial district in 1910: calculated by dividing total Indigenous and European population in 1910 by total land area of colonial district. When population data were missing for 1910, values for 1925 were used instead (closest available year of complete population data). Source: Huillery (2009).
- Indicator for the presence of a pre-colonial kingdom in colonial district: an indicator for the presence of a kingdom at the end of the nineteenth century. Source: Huillery (2009).
- Indicator for the presence of a pre-colonial acephalous society in colonial district: an indicator the presence of an acephalous society before colonial conquest. Source: Huillery (2009).
- Start of colonial conquest: year of the beginning of colonial conquest in the district. Source: Huillery (2009).
- Length of colonial conquest: number of years of resistance to French colonial conquest in the district. Source: Huillery (2009).
- Indicator for pre-colonial historical conflict in colonial district: Indicator variable for presence of historical conflict during pre-colonial period between 1400 and 1700. Source: Besley and Reynal-Querol (2014).

## Culture group controls:

- Fractionalization of culture groups around cell polygon: Fractionalization of culture groups around cell-polygon centroids using a 100km buffer. Fractionalization is calculated following the approach proposed by Alesina et al (2003) but using the proportion of area of each culture group within a 100km radius of the cell-polygon. The area of each culture group are calculated using the "Tribal Map of Africa" from George Murdock (1959) (digitalised by Nathan Nunn) and matched with the Human Relations Area Files database housed at Yale University (matched with the HRAF by Suzanne Blier and Julia Finkelstien). Source: Murdock HRAF 1959 v2 shapefile, Center for Geographic Analysis at Harvard University.
- Indicators for the presence of culture groups in colonial district: indicator variables for the presence of 27 culture group homelands in the colonial district. The 27 culture groups include: Akan; Arabs, Bedoin; Berbers, Moroccan; Borgu-Mango; Bornu; Ewe-Fon; Fulani, Sedentary; Grusi; Guinea; Habe; Hausa; Jos Plateau; Kru; Lobi; Mande, Nuclear; Mande, Southern; Marka; Mende-Temne; Mole; Niger, Fisherman; Nupe-Idoma; Senegal; Senufo; Songhai; Teda; Tuareg; Yoruba. o Source: Murdock HRAF 1959 v2 shapefile, Center for Geographic Analysis at Harvard University.

#### Grid-cell development controls:

- Population density in 1990: population density in the prio-grid cell in 1990, calculated as the population size in the cell divided by cell land area. Source: PRIO-GRID v.2.0.
- Gross cell product in 1990: gross cell product in the prio-grid cell in 1990, measured in USD. Source: PRIO-GRID v.2.0.
- Total area equipped for irrigation in 1990: Total area in the prio-grid cell equipped for irrigation in 1990, in hectares. Source: PRIO-GRID v.2.0.
- Urban area in 1990: Percentage area of the prio-grid cell covered by urban areas in 1990. Source: PRIO-GRID v.2.0.
- Agricultural area in 1990: Percentage area of the prio-gird cell covered by agricultural areas in 1990. Source: PRIO-GRID v.2.0.
- Forest area in 1990: Percentage area of the prio-grid cell covered by forest areas in 1990. Source: PRIO-GRID v.2.0.

## Country fixed effects:

• Fixed effects for 8 countries in AOF dataset (Mauritania and Niger are excluded for regressions with the personality index of administrators). The 8 countries include: Benin; Burkina Faso; Cote d'Ivoire; Guinea; Mali; Mauritania; Niger; Senegal. Source: Country border data from GAUL 2005.

figuresection

# Appendix - Additional Figures and Tables

Figure A1: Intersections Between Colonial District Boundaries and Grid-Cells











# Table A1: Colonial Hostility and Intensity of Civil Conflicts

	Dependent Variable: Intensity of UCDP-GED Conflict Events 1989-2016								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Colonial Hostility Prevalence Index 1906-1956	0.1680	0.1973**	0.1826**	0.0813***	0.0686**	0.0813***	0.0686**		
Clustered s.e. (district level)	(0.105)	(0.089)	(0.076)	(0.030)	(0.029)	(0.030)	(0.029)		
p-value	[0.113]	[0.029]	[0.018]	[0.008]	[0.021]	[0.006]	[0.017]		
Geographic Controls	No	Yes	Yes	Yes	Yes	Yes	Yes		
Historic Controls	No	No	Yes	Yes	Yes	Yes	Yes		
Culture Group Controls	No	No	No	Yes	Yes	Yes	Yes		
Cell Development Controls	No	No	No	No	Yes	No	Yes		
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	2689	2643	2643	2641	2621	2641	2621		
R-squared	0.0577	0.0995	0.1110	0.1945	0.2008				
Adjusted R-squared	0.0549	0.0898	0.0994	0.1751	0.1795				
Dependent Variable Mean	0.0081	0.0082	0.0082	0.0082	0.0081	0.0082	0.0081		
Dependent Variable Std.Dev.	0.0639	0.0644	0.0644	0.0644	0.0641	0.0644	0.0641		

Table A1:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in columns 6 and 7. The unit of observation is the cell polygon. Dependent variable is the average number of UCDP-GED conflict events in a year 1989-2016. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

 Table A2: Prevalence of Hostility and Contemporaneous Measures of Administrator Personality

		L	Lable A2:							
		Dependent Variable: Contemporaneous Personality Index								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Prevalence of Hostility Between Years of Evaluations	-0.0301	-0.0072	-0.0238	-0.0014	-0.1158	-0.1190	-0.0252	-0.0292		
Standard error	(0.152)	(0.140)	(0.145)	(0.137)	(0.221)	(0.221)	(0.211)	(0.209)		
p-value	[0.843]	[0.959]	[0.870]	[0.992]	[0.602]	[0.591]	[0.905]	[0.889]		
Personality Index of Previous Evaluation		0.2698***		0.2201***		-0.0794		-0.1034		
Standard error		(0.056)		(0.053)		(0.119)		(0.128)		
p-value		[0.000]		[0.000]		[0.507]		[0.421]		
Number of Years Between Evaluations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Year of Evaluation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Colonie Dummies	Yes	Yes	Yes	Yes	No	No	Yes	Yes		
Administrator Controls	No	No	Yes	Yes	No	No	No	No		
Administrator Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes		
Observations	402	402	402	402	402	402	402	402		
R-squared	0.0773	0.1396	0.1797	0.2184	0.8119	0.8131	0.8193	0.8212		
Adjusted R-squared	-0.0082	0.0573	0.0708	0.1122	0.3606	0.3593	0.3529	0.3541		
Dependent Variable Mean	0.0529	0.0529	0.0529	0.0529	0.0529	0.0529	0.0529	0.0529		
Dependent Variable Std.Dev.	0.6902	0.6902	0.6902	0.6902	0.6902	0.6902	0.6902	0.6902		

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Change in personality index is calculated as the difference between the personality index form the administrator evaluation in year i and the personality index from the previous observed administrator evaluation in year j. Prevalence of hostility between years of evaluations is calculated as the proportion of hostility reported for years between administrator evaluations in years i and j for each administrator. The personality index of the previous evaluation is the personality index from the admistrator evaluation conducted in year j. The sample is restricted to the set of administrator evaluations which have observable personality evaluations and observable hostility data in years i and j. Administrator controls include: age, marrital status, an indicator if born in Metropolitan France, an indicator if born in French colonies, an indicator if knows at least notions of local language, an indicator if recieved the Legion d'Honneur, an indicator for military experience, two indicators for the socio-professional background, two indicators for education status and two indicators for ENFOM student status. Robust standard errors reported in parentheses. P-values reported in square brackets.

	Table A3:							
	Dependent	Variable: Colonia	al Hostility Preva	lence Index				
	1906-1956 1906-1919 1923-1939 1943-1956							
	(1)	(2)	(3)	(4)				
Personality Index of first Administrator	-0.0403***	-0.0145	-0.0671***	-0.0045				
Standard error	(0.012)	(0.016)	(0.019)	(0.010)				
p-value	[0.001]	[0.351]	[0.000]	[0.643]				
Coorrectio		Vec	Vaa	Vee				
Geographic Controls	res	res	res	Yes				
Historic Controls	Yes	Yes	Yes	Yes				
Culture Group Controls	Yes	Yes	Yes	Yes				
Year of First Administrator	Yes	Yes	Yes	Yes				
Colony FE	Yes	Yes	Yes	Yes				
Observations	65	64	65	65				
R-squared								
Adjusted R-squared								
Dependent Variable Mean	0.0602	0.0690	0.0744	0.0205				
Dependent Variable Std.Dev.	0.0795	0.1202	0.1134	0.0807				

Table A3: Administrator Personality and Prevalence of Hostility Excluding Casamance

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Results reported for sample dropping Casamance. Robust standard errors reported in parentheses. P-values reported in square brackets.

Table A4: Administrator Personality and Prevalence of Hostility Excluding Districts Where the First Administrator Stayed Less Than 6 Months

Table A4:

	Dependent Variable: Colonial Hostility Prevalence Index					
	1906-1956	1906-1919	1923-1939	1943-1956		
	(1)	(2)	(3)	(4)		
-						
Personality Index of first Administrator	-0.0636***	-0.0388***	-0.0854**	-0.0047		
Standard error	(0.022)	(0.008)	(0.035)	(0.014)		
p-value	[0.004]	[0.000]	[0.016]	[0.743]		
Geographic Controls	Yes	Yes	Yes	Yes		
Historic Controls	Yes	Yes	Yes	Yes		
Culture Group Controls	Yes	Yes	Yes	Yes		
Year of First Administrator	Yes	Yes	Yes	Yes		
Colony FE	Yes	Yes	Yes	Yes		
Observations	52	51	52	52		
R-squared						
Adjusted R-squared						
Dependent Variable Mean	0.0595	0.0618	0.0708	0.0449		
Dependent Variable Std.Dev.	0.1096	0.1468	0.1214	0.1621		

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Results reported for sample dropping administrators that stayed less than 6 months in the district. Robust standard errors reported in parentheses. P-values reported in square brackets.

# Table A5: Administrator Personality and Prevalence of Hostility for Administrators ArrivingBefore 1910

Table A5:

	Dependent Variable: Colonial Hostility Prevalence Index						
	1906-1956	1906-1919	1923-1939	1943-1956			
	(1)	(2)	(3)	(4)			
Personality Index of first Administrator	-0.0566***	-0.0667***	-0.0697**	-0.0261			
Standard error	(0.018)	(0.017)	(0.033)	(0.028)			
p-value	[0.001]	[0.000]	[0.035]	[0.352]			
Geographic Controls	Yes	Yes	Yes	Yes			
Historic Controls	Yes	Yes	Yes	Yes			
Culture Group Controls	Yes	Yes	Yes	Yes			
Year of First Administrator	Yes	Yes	Yes	Yes			
Colony FE	Yes	Yes	Yes	Yes			
Observations	55	55	55	55			
R-squared							
Adjusted R-squared							
Dependent Variable Mean	0.0703	0.0736	0.0848	0.0424			
Dependent Variable Std.Dev.	0.0982	0.1417	0.1095	0.1578			

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard errors reported in parentheses. P-values reported in square brackets.

	Table Ao:			
	Dependent	Variable: Coloni	al Hostility Preva	lence Index
	1906-1956	1906-1919	1923-1939	1943-1956
	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0.0677***	-0.0119	-0.1354**	-0.0296***
Standard error	(0.023)	(0.017)	(0.053)	(0.004)
p-value	[0.003]	[0.486]	[0.011]	[0.000]
Geographic Controls	Yes	Yes	Yes	Yes
Historic Controls	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes
Year of First Administrator	Yes	Yes	Yes	Yes
Colony FE	Yes	Yes	Yes	Yes
Observations	51	50	51	51
R-squared				
Adjusted R-squared				
Dependent Variable Mean	0.0791	0.0963	0.0899	0.0392
Dependent Variable Std.Dev.	0.1119	0.1636	0.1236	0.1584

 Table A6: Administrator Personality and Prevalence of Hostility
 Excluding Cercles With the Same First Administrators

Table A6:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Results reported for sample dropping districts which had the same First Administrator. Robust standard errors reported in parentheses. P-values reported in square brackets.

# Table A7: Administrator Personality and Prevalence of HostilityAlternative Definitions ofSub-Periods and Dropping Years with Major Events

	Table	A7:			
	De	pendent Variabl	e: Colonial Hostili	ty Prevalence Ind	ex
	1906-1956	1906-1956	1906-1956	1906-1956	
1906-1956	Excluding	Excluding	Excluding Front	Excluding Great	

1906-1956	1906-1956 Excluding WW1	1906-1956 Excluding WW2	1906-1956 Excluding Front Populaire	1906-1956 Excluding Great Depression	1906-1929	1933-1956
(1)	(2)	(3)	(4)	(5)	(6)	(7)
-0.0561***	-0.0668***	-0.0558***	-0.0566***	-0.0483***	-0.0511***	-0.0531***
(0.012)	(0.013)	(0.012)	(0.013)	(0.014)	(0.016)	(0.017)
[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.002]
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	66	66	66	66	66	66
0.0681	0.0639	0.0714	0.0653	0.0597	0.0662	0.0688
0.1019	0.1063	0.1020	0.1077	0.1261	0.1228	0.1159
	1906-1956 (1) -0.0561*** (0.012) [0.000] Yes Yes Yes Yes Yes Yes 66 0.0681 0.1019	1906-1956         1906-1956           1906-1956         Excluding WW1           (1)         (2)           -0.0561***         -0.0668***           (0.012)         (0.013)           [0.000]         [0.000]           Yes         Yes           O.06681         0.0639           0.1019         0.1063	1906-1956         1906-1956         1906-1956           1906-1956         Excluding WW1         WW2           (1)         (2)         (3)           -0.0561***         -0.0668***         -0.0558***           (0.012)         (0.013)         (0.012)           [0.000]         [0.000]         [0.000]           Yes         Yes         Yes           Yes         Yes         Yes <td>1906-1956         1906-1956         1906-1956         1906-1956           1906-1956         Excluding WW1         WW2         Excluding Front Populaire           (1)         (2)         (3)         (4)           -0.0561***         -0.0668***         -0.0558***         -0.0566***           (0.012)         (0.013)         (0.012)         (0.013)           [0.000]         [0.000]         [0.000]         [0.000]           Yes         Yes         Yes         Yes           0.0681         0.0639         0.0714         0.0653           0.1019         0.1063         0.1020         0.1077</td> <td>1906-1956         1906-1956 Excluding WW1         1906-1956 Excluding Front Populaire         1906-1956 Excluding Great Depression           (1)         (2)         (3)         (4)         (5)           -0.0561***         -0.0668***         -0.0558***         -0.0566***         -0.0483***           (0.012)         (0.013)         (0.012)         (0.013)         (0.014)           [0.000]         [0.000]         [0.000]         [0.000]         [0.000]           Yes         Yes         Yes         Yes         Yes           Yes         &lt;</td> <td>1906-1956         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         <t< td=""></t<></td>	1906-1956         1906-1956         1906-1956         1906-1956           1906-1956         Excluding WW1         WW2         Excluding Front Populaire           (1)         (2)         (3)         (4)           -0.0561***         -0.0668***         -0.0558***         -0.0566***           (0.012)         (0.013)         (0.012)         (0.013)           [0.000]         [0.000]         [0.000]         [0.000]           Yes         Yes         Yes         Yes           0.0681         0.0639         0.0714         0.0653           0.1019         0.1063         0.1020         0.1077	1906-1956         1906-1956 Excluding WW1         1906-1956 Excluding Front Populaire         1906-1956 Excluding Great Depression           (1)         (2)         (3)         (4)         (5)           -0.0561***         -0.0668***         -0.0558***         -0.0566***         -0.0483***           (0.012)         (0.013)         (0.012)         (0.013)         (0.014)           [0.000]         [0.000]         [0.000]         [0.000]         [0.000]           Yes         Yes         Yes         Yes         Yes           Yes         <	1906-1956         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950         1906-1950 <t< td=""></t<>

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard errors reported in parentheses. P-values reported in square brackets.

# Table A8: Administrator Personality and Prevalence of HostilitySimple Control FunctionUsing Different Month Intervals Around the Arrival Date of the First Administrator

	Contr	al Eurotian usin	Depender	t Variable: Coloni	al Hostility Provala			
_	Contr	ol Function usin			al hostility Flevale	nce Index		
—	1906-1956	Control Function using a 2 month internval			Control Function using a 4 month internval			
	1500 1550	1906-1919	1923-1939	1943-1956	1906-1956	1906-1919	1923-1939	1943-1956
_	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0.0847***	-0.0059	-0.1181***	-0.0884***	-0.0876***	-0.0346	-0.1079***	-0.0913***
Standard error	(0.022)	(0.021)	(0.034)	(0.030)	(0.025)	(0.025)	(0.036)	(0.031)
p-value	[0.000]	[0.784]	[0.001]	[0.003]	[0.000]	[0.161]	[0.003]	[0.003]
Personality Index * Latent Correlation	0.0122*	-0.0067	0.0231**	0.0160*	0.0108*	0.0036	0.0151	0.0138*
Standard error	(0.007)	(0.007)	(0.011)	(0.010)	(0.006)	(0.006)	(0.010)	(0.008)
p-value	[0.069]	[0.346]	[0.039]	[0.097]	[0.086]	[0.583]	[0.123]	[0.069]
	Contr	ol Function usin	g a 6 month inte	rnval	Contro	ol Function using	z an 8 month inte	ernval
—	1906-1956	1906-1919	1923-1939	1943-1956	1906-1956	1906-1919	1923-1939	1943-1956
_	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Personality Index of first Administrator	-0 0866***	-0.0011	-0 1145***	-0 1000***	-0.0695**	0.0368	-0 0999***	-0.0817**
Standard error	(0.028)	(0.027)	(0.037)	(0.036)	(0.028)	(0.033)	(0.037)	(0.039)
p-value	[0.002]	[0.968]	[0.002]	[0.006]	[0.013]	[0.264]	[0.007]	[0.036]
Personality Index * Latent Correlation	0.0074	-0.0050	0.0123	0.0119*	0.0026	-0.0109*	0.0071	0.0060
Standard error	(0.006)	(0.005)	(0.008)	(0.007)	(0.005)	(0.006)	(0.007)	(0.007)
p-value	[0.183]	[0.337]	[0.136]	[0.095]	[0.575]	[0.054]	[0.289]	[0.357]
Geographic Controls	Voc	Voc	Vec	Vec	Vec	Vec	Ver	Vec
Historic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Culture Group Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	66	65	66	66	66	65	66	66
R-squared								
Adjusted R-squared								
Dependent Variable Mean	0.0681	0.0803	0.0783	0.0354	0.0681	0.0803	0.0783	0.0354
Dependent Variable Std.Dev.	0.1019	0.1498	0.117	0.1448	0.1019	0.1498	0.117	0.1448

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in column 1 through 4. Robust standard errors reported in parentheses. P-values reported in square brackets.

Table A9: Administrator Personality and Prevalence of Hostility Simulated Correlation Control Function Using Different Month Intervals Around the Arrival Date of the First Administrator

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Lan	CΓ	13	•

		Dependent Variable: Colonial Hostility Prevalence Index								
	Simulated Correlation ontrol Function using a 2 month internval				Simulated Correlation ontrol Function using a 4 month internval					
	1906-1956	1906-1919	1923-1939	1943-1956	1906-1956	1906-1919	1923-1939	1943-1956		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		
Personality Index of first Administrator	-0 1049***	-0.0136	-0 1486***	-0 1084***	-0 1828***	-0 1057**	-0 2357***	-0 1735***		
Standard error	(0.022)	(0.025)	(0.036)	(0.032)	(0.049)	(0.053)	(0.083)	(0.065)		
p-value	[0.000]	[0.587]	[0.000]	[0.001]	[0.000]	[0.045]	[0.005]	[0.008]		
Personality Index * Latent Correlation	0.1694***	-0.0310	0.2946***	0.1996**	0.2866***	0.1777	0.3889**	0.2771**		
Standard error	(0.057)	(0.069)	(0 102)	(0.090)	(0.098)	(0 111)	(0 173)	(0.131)		
p-value	[0.003]	[0.654]	[0.004]	[0.027]	[0.004]	[0.109]	[0.025]	[0.035]		
	Simulated Co	Simulated Correlation ontrol Function using a 6 month internyal				Simulated Correlation ontrol Function using a 8 month internval				
	1906-1956	1906-1919	1923-1939	1943-1956	1906-1956	1906-1919	1923-1939	1943-1956		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		
Personality Index of first Administrator	-0.2398***	-0.0678	-0.3230***	-0.2211**	-0.1310**	0.0982	-0.2439***	-0.0719		
Standard error	(0.053)	(0.088)	(0.080)	(0.095)	(0.062)	(0.100)	(0.091)	(0.099)		
p-value	[0.000]	[0.443]	[0.000]	[0.020]	[0.034]	[0.327]	[0.007]	[0.469]		
Personality Index * Latent Correlation	0.3353***	0.0781	0.4732***	0.3106*	0.1265	-0.1981	0.3044**	0.0353		
Standard error	(0.093)	(0.152)	(0.150)	(0.166)	(0.102)	(0.165)	(0.154)	(0.164)		
p-value	[0.000]	[0.607]	[0.002]	[0.061]	[0.213]	[0.231]	[0.049]	[0.829]		
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Historic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Culture Group Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	66	65	66	66	66	65	66	66		
R-squared										
Adjusted R-squared										
Dependent Variable Mean	0.0681	0.0803	0.0783	0.0354	0.0681	0.0803	0.0783	0.0354		
Dopondont Variable Std Dov	0 1019	0 1498	0 117	0 1448	0 1019	0 1498	0 117	0 1448		

# Table A10: Administrator Personality Index and Intensity of Civil Conflicts

	Dopped ant Variables Intensity of LICAR GED Conflict Events 1989, 2016							
	(1) (2) (3) (4) (5) (6)							
Personality Index of first administrator Clustered s.e. (district level) p-value	-0.0048 (0.007) [0.482]	-0.0131* (0.008) [0.089]	-0.0143* (0.008) [0.064]	-0.0071 (0.005) [0.131]	-0.0082* (0.004) [0.052]	-0.0071 (0.004) [0.112]	-0.0082** (0.004) [0.039]	
Geographic Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	
Historic Controls	No	No	Yes	Yes	Yes	Yes	Yes	
Culture Group Controls	No	No	No	Yes	Yes	Yes	Yes	
Cell Development Controls	No	No	No	No	Yes	No	Yes	
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Observations	955	941	941	941	930	941	930	
R-squared	0.0254	0.1391	0.1666	0.2904	0.2986			
Adjusted R-squared	0.0161	0.1117	0.1344	0.2438	0.2467			
Dependent Variable Mean	0.0097	0.0098	0.0098	0.0098	0.0095	0.0098	0.0095	
Dependent Variable Std.Dev.	0.0873	0.0879	0.0879	0.0879	0.0873	0.0879	0.0873	

Table A10:

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. PDS Lasso estimates reported in columns 6 and 7. The unit of observation is the cell polygon. Dependent variable is the average number of UCDP-GED conflict events in a year 1989-2016. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

Table A11: Administrator Personality Index and Intensity of Civil Conflicts and Non-State Conflicts for the Full Sample and Restricted Sample of Cells with 100km of Colonial Main Cities

	Dependent Variable:				Dependent Variable:					
	Intensi	Intensity of UCDP-GED Conflict Events 1989-2016				Intensity of UCDP-GED Non-State Conflict Events 1989-2016				
	full sample	full sample	Cells Within 100km of Colonial Main City	Cells Within 100km of Colonial Main City	full sample	full sample	Cells Within 100km of Colonial Main City	Cells Within 100km of Colonial Main City		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Personality Index of first administrator Clustered s.e. (district level)	-0.0071	-0.0082*	-0.0147*	-0.0157**	0.0009	0.0007	0.0010	0.0009		
p-value	[0.131]	[0.052]	[0.065]	[0.043]	[0.405]	[0.470]	[0.457]	[0.503]		
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Historic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Culture Group Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Cell Development Controls	No	Yes	No	Yes	No	Yes	No	Yes		
Year of First Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	941	930	658	648	941	930	658	648		
R-squared	0.2904	0.2986	0.3382	0.3646	0.0869	0.1236	0.1168	0.1562		
Adjusted R-squared	0.2438	0.2467	0.2753	0.2960	0.0268	0.0587	0.0329	0.0652		
Dependent Variable Mean	0.0098	0.0095	0.0116	0.0117	0.0017	0.0018	0.0024	0.0025		
Dependent Variable Std.Dev.	0.0879	0.0873	0.1026	0.1033	0.0251	0.0253	0.0300	0.0302		

Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The unit of observation is the cell polygon. Dependent variable in columns 1 through 4 is the average number of UCDP-GED conflict events in a year for the period 1989-2016. Dependent variable in columns 5 though 8 is the average number of UCDP-GED non-state conflict events in a year for the period 1989-2016. Columns 3, 4, 7 and 8 restrict the sample to cells with centroids within a 100km from the main city during colonization period in colonial district in which they fall. Standard errors, in parentheses, are clustered at the colonial cercle level. P-values are reported in square brackets.

Table A11: