

The Institutional Legacy of African Independence Movements*

Leonard Wantchekon[†] Omar García-Ponce[‡]

May 18, 2011

Abstract

We investigate the long-term effect of the geography of anti-colonial insurgencies (c.1900-1960) on the nature of current democratic institutions and political behavior in Africa. We find that while rural insurgencies (e.g. Madagascar, Kenya, Cameroon, Somalia) tend to generate autocracies, urban insurgencies (e.g. Senegal, South Africa, Benin, Ghana) tend to lead to democratic institutions. This is because urban insurgencies are mass uprisings that create conditions for popular political participation and strong civil societies. In contrast, rural insurgencies are military organizations that tend to limit political rights and generate less inclusive governments. We provide evidence that the relationship between the nature of anti-colonial insurgencies and democratization causal, by using the proportion of a country covered by mountaneous terrain as an instrument for rural insurgency. The results indicate that democratization may result from the legacy of historical events, specifically the forms of political dissent under colonial rule.

*Preliminary draft prepared for seminary presentation.

[†]Professor of Politics and Economics. New York University.

[‡]Ph.D. Student. Department of Politics. New York University.

1 Introduction

Modernization theory remains one of the most intense and open research questions in social sciences. Following Lipset (1959), Przeworski (1997), there have been a new wave of studies focused on the role of income (Acemoglu et al. 2008; Benhabib et al. 2011), education (Glaeser et al. 2007), and factor mobility (Boix 2003). But the literature lacks a good understanding of political mechanisms of modernization, that is, a theory of how economic factors affect political variables that are directly relevant to democratization such as social movements, civic culture, political violence. This theory would help us make sense of situations where modernization fails to capture the empirical regularity of democratization. This is clearly the case in Africa, where despite striking similarity in economic conditions, institutional development has been very unevenly distributed in recent years.

While a number of countries such as South Africa, Ghana and Benin have experienced major democratic reforms after the Cold War, others such as Cameroon, Congo and Zimbabwe either remained autocratic or became unstable democracies plagued with political violence. The conventional wisdom is that African countries with stable democracies are those with “wise” leaders and civil society organizations with strong democratic values (e.g., Bratton & Van de Walle 1997; Joseph 1997). Obviously, civil society strength and leadership style are highly endogenous. The question is: what generates or at least facilitates democratic values in the first place?

We find that democratic culture in Africa originates from the legacy of the independence movements; specifically from the way these movements were conducted. Countries that experienced major rural anti-colonial insurgencies between 1900 and the year of independence, tend to be either autocratic or unstable democracies, specifically after the end of the Cold War, from 1989 to 2000. Urban anti-colonial insurgencies generate the opposite effect during the same time period. Our results are consistent with the view that events during critical historical junctures can lead to divergent political development paths (Acemoglu et al 2009:1043). The critical juncture for democratic change in Africa is the nature of its independence movements.

Our results build on well established insights from political science and economics that significant historic events can generate path-dependency and significantly shape future institutions and norms of behavior (Pierson, 2000, Arthur, 1994,). We hypothesize that countries that have experienced urban mass uprisings have developed stronger norms of peaceful political participation at the citizen

level, and political accommodation at the elite level. The reverse is to be true in countries with a legacy of violent rural rebellion: when the rebellion fail, political rights are severely restricted, and political participation is limited. When the rebellion succeeds, its leaders are likely to limit access to government only to those that “fought in the bush”, and this generates a culture of political exclusion.

An alternative to our findings is that pre-colonial state violence leads to the emergence of a “warrior mentality” in parts of Africa, which fosters the adoption of guerilla tactics by anti-colonial insurgents. In other words, pre-colonial states shape current democratic institutions through their effect on the nature of Independence movements. Alternatively, urbanization, population density, and land size might be correlated with insurgency.

We establish that the relationship that we uncover between insurgency and democracy is causal, by controlling for a host of a number of pre-colonial and colonial variables and by using the percentage of the country covered by mountains as an instrument for rural insurgency. We find that mountainous terrain facilitates the adoption of rural guerilla tactics and does not have a direct effect on democratic change. We verify the exclusion restriction by showing that mountains affect democracy in African countries only through the experience of a major rural insurgency during colonial times.

After establishing the relationship between anti-colonial insurgency and democracy, we formally test two possibly complementary channels of causality. We show that rural insurgency results in weaker “democratic ingredients” during the Cold War, i.e. restricted civil liberties and less inclusive governments, which ultimately, leads to less democracy after the Cold War. Interestingly, despite having stronger “democratic ingredients”, urban insurgency countries were not significantly more democratic than rural insurgency countries during the Cold War. It is only after the collapse of communism that these ingredients produced more democratic governments.

Our results have important implications for the study of political development. They indicate that past social movements may have profound effects on current institutions and political attitudes. The results suggest that colonial history matters for African political development not only because of the policies enacted by the colonial administration, but also because of the way African pro-independence leaders chose to oppose them. Those who opposed them by setting up clandestine newspapers or organizing mass protests left an enduring legacy of democratic values. On the

contrary, those who fought colonialism by setting up rural rebel groups left a weak democratic, or rather autocratic institutional legacy. To the best of our knowledge, this paper is the first to highlight and identify the impact of historic events and social movements on democratization.

The article is organized as follows. We start presenting the theoretical framework. We then describe our data sources, followed by the empirical strategy. Section 5 presents the main empirical results and Section 6 discuss the channel of causality. Section 7 concludes.

2 Theoretical Framework

The theoretical argument of the paper is based on an extended version of models of regime change and revolutionary entrepreneurs by Ethan Bueno de Mesquita (2010) and Calvo et al. (2009). In the model, a vanguard revolutionary group wants to force a regime change. They can engage in a series of violent actions (e.g. rural rebellion) as a way to mobilize citizens against the colonial power. Indeed, using evidence from Argentinian, Russian and Algerian revolutions, EBM (2010) argues that violence can help manipulate citizens' beliefs about the extent of anti-status quo sentiment in the population and make citizens more willing to participate in a revolution.

Besides organized violence, the vanguard group can ask members (especially those with ties with labor unions and civic associations) to vote on whether or not to hold a mass protest. This was the case for the "Parti Africain pour l'indépendance" in Senegal, and the African National Congress in South Africa. The outcome of the vote represents a public signal on the probability of success of the mass protest: it is a weakly dominated strategy for a member to vote in favor for the mass protest and not showing up at the protest. This would make the movement more likely to fail, which is costly to every member of the group. Depending on structural factors such as geography or demography, the vanguard group can choose the "violent rebellion" strategy or the "mass uprising or revolution by consensus" strategy as a way to force regime change.

Since rural rebellion is zero-sum, it is likely to generate a more restricted and less open political environment after independence. In contrast, urban mass movement is naturally inclusive. As a result, it is more likely to generate an expansion of political rights and more open governments, which facilitates the emergence of democratic progress in the long run.

3 Data & Measurement

To analyze the institutional legacy of anti-colonial insurgencies in Africa, we combine data from a number of sources: (1) an in-depth review of historical events to code countries as either having a legacy of rural or urban insurgency; (2) measures of democracy, based on Polity IV scores; (3) pre-colonial and colonial data on institutional development and social structure characteristics, mainly based on George P. Murdock’s classification (1957); (4) the proportion of a country that is mountainous according to the codings of geographer A.J. Gerard (from Fearon & Laitin 2003); (5) a combination of Fearon & Laitin’s data on civil wars (2003) and Przeworski’s dataset of political variables (2010); and (6) individual-level measures of political attitudes from the most recent wave of the Afrobarometer (2008).

3.1 Rural vs. Urban Insurgency

Our independent variable of interest is type of insurgency, which is an indicator variable that takes on values of 1 (Rural) or 0 (Urban). Rural and urban insurgencies were coded by hand, based on in-depth reviews of historical events for each country, covering the period between 1900 and the year of independence (*circa* 1960)¹. Countries that experienced major rural uprisings are coded as having a legacy of “rural insurgency”. This type of insurgency involves a series of violently crushed rebellions, usually based on rural areas, and organized in the style of Mao’s Red March. In contrast, the countries that experienced urban, and rather non-violent, social movements are coded as being exposed to a legacy of “urban insurgency”².

One obvious example of a rural anti-colonial insurgency is the Mau Mau uprising (1952-1960), which set the stage for Kenyan independence³. Another interesting example is the Malagasy uprising (1947-1948), one of the bloodiest episodes in the history of Colonial Africa⁴. As for cases of urban

¹Only seven countries were independent before 1960: Egypt (1922), Libya (1951), Morocco (1953), Sudan (1956), Tunisia (1956), Ghana (1957), and Guinea (1958). Likewise, only six countries achieved independence after the 1960s: Guinea Bissau (1974), Angola (1975), Mozambique (1975), Zimbabwe (1980), Namibia (1990), and Eritrea (1993).

²Countries that did not experience either major rural insurgencies or urban social movements leading to independence were dropped from the dataset.

³This insurgency against the British Empire is regarded as Africa’s first modern guerrilla war. Mau Mau rebels implemented typical guerrilla tactics aiming the capital while hiding in the highlands. Atrocities were inflicted by both sides of the conflict, and the death toll is estimated range into the thousands.

⁴In March 1947, a group of Malagasy nationalists revolted against the colonial rule. The uprising immediately spread over one-third of Madagascar’s territory, but the French army crushed the rebellion after receiving reinforcements, suppressing all signs of insurrection by November 1948. Recent quantitative research suggests this event traumatized the population across generations in affected areas of the country (Wantchekon & García-Ponce 2011).

insurgency, countries such as Ghana and Senegal may illuminate our understanding of how a legacy of vibrant social movements in urban areas affects institutions in the long run. In both cases, peaceful manifestations and sporadic rioting in the cities were at the core of mobilization processes that eventually lead to independence⁵.

To be more precise, countries that experienced major rural anti-colonial insurgencies between 1900 and independence include: Algeria, Angola, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Eritrea, Guinea Bissau, Kenya, Libya, Madagascar, Morocco, Mozambique, Namibia, Rwanda, Somalia, Sudan, Swaziland, Uganda, and Zimbabwe. Conversely, countries that experienced urban insurgencies include: Benin, Botswana, Congo, DRC, Egypt, Gabon, Ghana, Guinea, Ivory Coast, Lesotho, Malawi, Mali, Mauritania, Mauritius, Niger, Nigeria, Senegal, Sierra Leone, South Africa, Tanzania, Tunisia, and Zambia.

3.2 Measures of Democracy

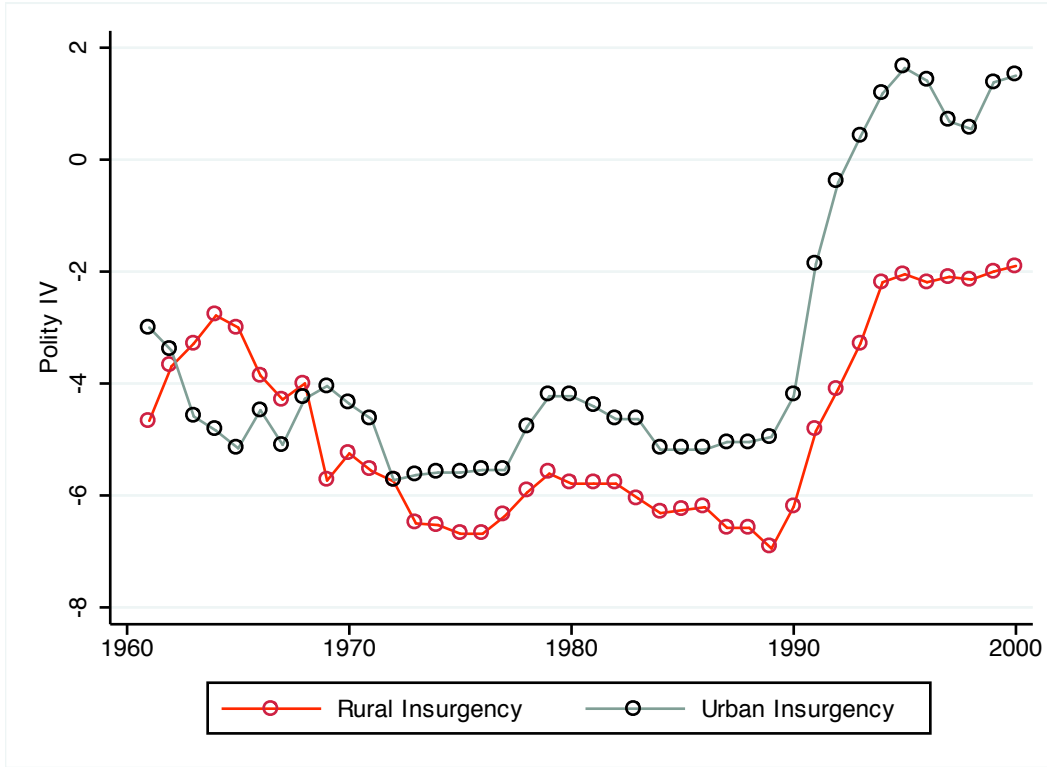
Measures of degree of democratization come from the Polity IV index, which evaluates the openness of political regimes on a scale from -10 (strongly autocratic) to 10 (strongly democratic). Components of the index include competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive. A mature and internally coherent democracy, for example, might be operationally defined as one in which (a) political participation is unrestricted, open, and fully competitive; (b) executive recruitment is elective, and (c) constraints on the chief executive are substantial.

We take into consideration annual scores for all African countries between the year during which they became independent and 2000. The figure below displays the relationship between type of insurgency and average Polity IV scores over time. As we can see, countries exposed to a legacy of rural insurgency have had a tendency to be less democratic than their counterparts. This trend seems to run parallel to the so-called “third wave” of democratization, and is crystal clear after 1989, that is, after the end of the Cold War. Note, however, that some interesting patterns can be identified before 1989. For instance, democracy scores of urban-insurgency countries have progressively increased

⁵In Ghana, for instance, social unrest was generated against the colonial rule because the government failed to meet demands from a working class largely affected by the rise of foodstuffs prices and the suspension of salary increases. The government’s repressive response to peaceful manifestations was the breaking point that unleashed the riots in Accra on February 28, 1948. This incident is seen as the beginning of the process of independence.

since the early 1980s (except 1999), while democracy scores of rural-insurgency countries have been fluctuating over time, revealing the existence of unstable institutions.

Figure 1: Relationship Between Type of Insurgency & Democracy



3.3 Pre-Colonial & Colonial Data

The way anti-colonial movements were organized may be correlated with pre-colonial institutions and/or demographic conditions. More politically “sophisticated” societies may resist differently and more effectively to colonization. Likewise, one would expect the degree of urbanization to be highly correlated with urban insurgency. Therefore, we incorporate the number of jurisdictional hierarchies at the local and beyond the local community, based on Murdock’s classification (1957). This gives us some information on the degree of institutional development before the colonizers arrived. In addition, we use population size, urban population rate, population density, land size, and ethnic fractionalization for the period of time right before independence (*circa* 1950s) .

3.4 Mountainous Terrain

To explain why some countries have experienced rural, rather than urban, insurgencies one needs to understand the conditions that favor rural uprising. The presence of a rough terrain, poorly served by roads seems to be a good predictor of insurgency and civil war (Fearon & Laitin 2003). As measures for “rough terrain” we use the proportion of the country that is “mountainous.” This follows Fearon & Laitin’s (2003) strategy according to the coding of geographer A.J. Gerard. Unfortunately, this measure does not include other types of rough terrain that could facilitate guerrilla tactics, such as swamps and jungle.

3.5 Country-Year Characteristics

We include a set of control variables used in most econometric analysis of the determinants of political institutions: Lagged GDP per capita, colonial rule (British and French), new state formation, religious fractionalization, ethnic fractionalization, political instability, lagged war, oil, population size, and number of conflicts. These covariates are taken from Fearon & Laitin’s data on civil wars (2003). In addition, we use Przeworski’s dataset of political variables (2010) to test potential mechanisms through which the institutional legacy of independence movements might operate. Specifically, we test the effects of rural vs. urban insurgency on constitutional provisions concerning the composition and mode of election of legislatures.

3.6 Afrobarometer

Finally, data on political attitudes (democratic values, freedom of expression, and trust in political institutions) come from the fourth round of the Afrobarometer (2008), which is an independent and non-partisan research project conducted by Center for Democratic Development (CDD), the Institute for Democracy in South Africa (IDASA) and the Institute of Empirical Research in Political Economy in Benin. The Afrobarometer measures the social, political and economic atmosphere in Africa. Surveys were repeated on a regular cycle since 1999 and the fourth round was conducted in 20 countries. Surveys are based on interviews of random, national representative samples of 1000-1350 adults.

Table 1: Descriptive Statistics

MACRO-ANALYSIS VARIABLES	Obs.	Mean	Std. Dev.	Min.	Max
<i>Dependent Variable</i>					
Polity IV	1602	-4.06	5.47	-10.00	10.00
<i>Independent Variable of Interest</i>					
Rural Insurgency	1615	0.45	0.50	0.00	1.00
Instrument: Mountains (log)	1615	1.64	1.35	0.00	4.42
<i>Covariates</i>					
GDP (Log)	1590	6.93	0.67	5.28	9.31
Population (log)	1613	8.69	1.14	5.98	11.71
British Colony	1615	0.41	0.49	0.00	1.00
French Colony	1615	0.43	0.49	0.00	1.00
Oil Country	1615	0.15	0.36	0.00	1.00
Religious Fractionalization	1615	0.43	0.23	0.00	0.78
Ethnic Fractionalization	1615	0.59	0.28	0.04	0.93
New State	1615	0.05	0.22	0.00	1.00
Instability	1607	0.17	0.38	0.00	1.00
War	1615	0.15	0.36	0.00	1.00
Number of Conflicts	1615	0.17	0.40	0.00	2.00
Partially Elected Leg.	1615	0.80	0.40	0.00	1.00
Existence of Legislature	1615	0.82	0.38	0.00	1.00
Directly Elected Leg.	1615	0.91	0.29	0.00	1.00
Civil Liberties	856	0.28	0.21	0.00	0.83
Year	1615	1975.5	15.16	1945	2000
MICRO-ANALYSIS VARIABLES	Obs.	Mean	Std. Dev.	Min.	Max
<i>Dependent Variables</i>					
Military Rule	26420	1.90	1.18	1.00	5.00
One Party Rule	26691	2.09	1.31	1.00	5.00
One Man Rule	26140	1.77	1.06	1.00	5.00
Free Speech	27039	3.29	0.94	1.00	4.00
Free Association	26612	3.49	0.85	1.00	4.00
Free Vote	27012	3.61	0.76	1.00	4.00
Trust President	26142	1.86	1.10	0.00	3.00
Trust Parliament	25606	1.68	1.06	0.00	3.00
Trust Electoral Inst.	25160	1.58	1.12	0.00	3.00
Trust Local Gov.	25810	1.58	1.08	0.00	3.00
<i>Independent Variable of Interest</i>					
Rural Insurgency	25249	0.38	0.49	0	1
<i>Covariates</i>					
Female	27713	0.50	0.50	0	1
Age	27380	36.33	14.50	18	110
Education	27669	5.52	3.84	0	18
Rural	27713	0.62	0.49	0	1
Household Income	26683	2.78	1.01	1	5
Religion: Christian	27713	0.13	0.34	0	1
Religion: Muslim	27713	0.16	0.37	0	1
Religion: Catholic	27713	0.23	0.42	0	1

4 Empirical Strategy

We investigate the effects of anti-colonial insurgency at two different levels of analysis. First, we focus on the macro-level dynamics, that is, the effect of type of insurgency on shaping national-level institutions. Secondly, we explore how this effect persists over time at a micro-level, that is, shaping people’s attitudes toward democracy, as well as individual self-reported levels of freedom of expression and trust in political institutions.

4.1 Estimation of Macro-Effects

We employ a times-series cross-sectional analysis, where the unit of analysis is the country, the dependent variable is democracy (Polity IV scores), and the independent variable of interest is *Rural Insurgency*, which indicates whether a country experienced a rural insurgency or not. Thus, we follow the standard strategy to estimate the determinants of democracy, but incorporate type of insurgency in the right-hand side of the equation. The reduced-form linear regression that will be estimated is the following:

$$Y_{it} = \alpha + \tau_t + X'_{it}\beta_1 + \beta_2 RuralInsurgency_i + \epsilon_{it} \quad (1)$$

where Y_i is the outcome of interest (Polity IV) for country i in year t . X_{it} is a vector of control variables, which includes one-year lagged GDP p.c., colonial rule, an indicator for newly formed states, religious fractionalization, ethnic fractionalization, political instability, lagged war, oil country, population size, and number of conflicts. Time fixed effects (τ_t) are included to capture time trends that may be related to democracy levels. The term ϵ_i is a disturbance term, which is allowed to be correlated across years for the same country in all regressions. We do not use country fixed effects because rural insurgency is a time-invariant characteristic, so the unit effect dummies and this variable would be perfectly collinear. Therefore, we run pooled OLS and random effects models, being the latter our preferred estimation method. According to Plumper and Troeger (2007), random effects should perform better than pooled OLS. When time invariant variables preclude the estimation of unit fixed effects, random effects may serve as a viable second best option⁶.

⁶We tested for random effects using the Breusch-Pagan Lagrange Multiplier (LM), and rejected the null that variances across entities is zero with Prob > chi2 = 0.0000. We therefore feel confident that random effects is an appropriate strategy.

To deal with potential problems of endogeneity, we compute IV estimates running 2SLS and G2SLS random-effects regression models that use percentage of mountains in the country as an instrumental variable for rural insurgency. One potential problem of endogeneity is that countries that experienced rural and urban insurgencies may differ in ways that are correlated with both the independent variable of interest (democracy scores) and the probability of having experienced a particular kind of insurgency. It might be the case that democratic features of pre-colonial institutional settings explain both the type of anti-colonial insurgency and the type of institutional arrangement established after independence. In other words, type of insurgency could be endogenous to past “democratic” institutions or experiences.

Thus, we need an instrument for rural insurgency to improve the estimation of causal effects. It has been widely suggested in the literature that rough or mountainous terrain is positively correlated with insurgency and/or civil war (Fearon & Laitin 2003). This correlation seems to be particularly strong in the case of Africa, which makes me believe this measure is the best available instrument. Pearson’s correlation coefficient for the relationship between rural insurgency and percentage of mountainous terrain is $r = (+)0.54$.

4.2 Estimation of Micro-Effects

We use individual-level survey data from 20 countries (Afrobarometer 2008) to examine the long-term effects of type of insurgency on three different sets of dependent variables: (1) support for autocracy or "authoritarian views", (2) freedom of expression, and (3) trust in political institutions. As earlier mentioned, respondents’ answers to relevant questions related to the abovementioned topics are interpreted as self-reported levels of democratic values.

The exact wording of the three questions related to authoritarian views is as follows: *There are many ways to govern a country, would you disapprove or approve of (q1) Only one political party being allowed to stand for election and hold office? (q2) Elections and the Parliament are abolished so that the president can decide everything? (q3) The army comes in to govern the country?* Respondents may choose to answer either: (i) strongly disapprove, (ii) disapprove, (iii) approve, or (iv) strongly approve. We interpret answers to these questions as support for one-party rule, one-man rule, and military rule, respectively.

Likewise, the Afrobarometer asks respondents to answer: *how free are you to say what you*

think? to join any political organization you want? and to choose whom to vote for without feeling pressured? To each of these three questions, respondents can choose to answer either (i) completely free, (ii) somewhat free, (iii) not very free, or (iv) not at all free. This information provides us with individual, ordinal measures of freedom of speech, association, and vote.

Finally, answers to four relevant questions are used to measure individual trust in political institutions. The exact wording of these questions is as follows: *How much do you trust each of the following, or haven't you heard enough about them to say: the president? the parliament? the electoral institutions? the local governments?* Respondents may choose to answer either (i) not at all, (ii) just a little bit, (iii) somewhat, or (iv) a lot.

Since all the above-cited questions are to be treated as ordinal variables, we estimate ordered logistic regression models. In all specifications the unit of analysis is the respondent. Rural Insurgency is the independent variable of interest, and we control for the usual socio-demographic confounders: gender, age, years of education, urban vs. rural area, religion, and household income. Again, we do not incorporate country fixed effects given that exposure to a legacy of Rural Insurgency is assumed to be a country characteristic. Since our independent variable of interest does not vary within countries, robust standard errors are clustered at the country level.

5 Main Empirical Results

5.1 Macro-Effects

Table 2 displays OLS and random-effects estimates of the determinants of democracy for different periods of time. The data indicates that rural insurgency is not a good predictor of Polity IV scores for the entire period c.1960-2000. The coefficient on rural insurgency is negative, but not statistically significant. Similarly, it seems that the type of insurgency does not explain much of democratic attainment between c.1960-1989. However, rural insurgency is strongly and negatively correlated with democracy levels for the period 1990-2000. The effect is statistically significant in both OLS and random-effects models.

These preliminary findings suggest that the type of insurgency experienced during colonial times does not affect democratic development immediately after independence, but rather in the long run (after the so-called third wave of democratization). Remember, however, that these specifications

Table 2: OLS & Random-Effects Estimates of the Determinants of Democracy in Africa

DV: Polity IV	c.1960-2000		c.1960-1989		1990-2000	
	OLS	Random-Effects	OLS	Random-Effects	OLS	Random-Effects
Rural Insurgency	-1.471 (0.982)	-1.207 (1.032)	-0.490 (0.942)	-0.450 (0.984)	-3.759*** (1.388)	-3.687** (1.423)
Lagged GDP	2.679** (1.043)	2.410** (1.059)	2.571** (1.118)	2.684** (1.094)	2.382* (1.201)	2.220* (1.247)
Population	-0.0586 (0.585)	-0.298 (0.636)	-0.217 (0.623)	-0.232 (0.644)	-0.355 (0.698)	-0.420 (0.724)
British Colony	1.779 (1.284)	2.041 (1.232)	3.771*** (1.157)	3.721*** (1.189)	-2.045 (2.053)	-2.028 (2.018)
French Colony	-0.673 (1.138)	-0.591 (0.991)	-0.157 (0.834)	-0.0665 (0.803)	-1.020 (2.078)	-1.150 (1.996)
Oil Country	-3.526*** (1.129)	-3.068** (1.148)	-3.096** (1.212)	-2.865** (1.174)	-4.467*** (1.628)	-4.062** (1.669)
Religious Frac.	3.410 (2.469)	3.172 (2.546)	2.245 (1.955)	2.977 (2.111)	6.327 (4.686)	6.027 (4.731)
Ethnic Frac.	-1.029 (2.003)	-0.739 (2.016)	-0.714 (1.651)	-0.833 (1.692)	-0.972 (3.805)	-1.023 (3.795)
New State	3.631*** (0.918)	3.913*** (0.987)	4.040*** (0.876)	3.385*** (0.949)	6.977** (3.092)	9.066*** (2.827)
Instability	2.986*** (0.607)	1.971*** (0.524)	0.511 (0.684)	0.348 (0.759)	4.340*** (0.612)	3.704*** (0.603)
Lagged War	0.233 (0.693)	0.632 (0.578)	0.750 (0.711)	0.847 (0.729)	0.171 (1.275)	0.154 (1.354)
N. of Conflicts	1.397* (0.769)	0.504 (0.731)	1.082 (0.737)	1.316* (0.753)	-0.246 (1.215)	-0.378 (1.160)
σ	4.798	4.517	4.199	4.162	4.883	4.737
N	1574	1574	1169	1169	405	405

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

do not solve potential problems of endogeneity

As previously mentioned, “rural insurgency” is instrumented by the percentage of mountainous terrain. To estimate the effect of mountainous terrain on rural insurgency, we control for potential confounders. Geographic conditions as well as socio-demographic characteristics before or during the independence year may be correlated with ways anti-colonial movements were organized. Therefore, we include land size, population size, population density, and urban population as a percentage of the total population at the time of independence. Similarly, we include urban population growth during the last 5 years prior to independence. Ethnic fractionalization, as well as British and French colonial rule, are used to control for cultural cleavages and institutional factors. It might be the case, for instance, that rural insurgencies were more likely to occur in more ethnically diverse societies. Finally, we control for the number of jurisdictional hierarchies at the local and beyond the local community during pre-colonial times. We might expect pre-colonial institutional development to affect anti-colonial types of rebellion.

Table 3: Determinants of Anti-Colonial Rural Insurgencies in Africa

	OLS		Logit	
Mountains (log)	0.30***	(0.08)	2.43**	(0.99)
Pre-Colonial Local Inst.	0.13	(0.30)	1.84	(2.97)
Pre-Col. Inst. Beyond Local	-0.22	(0.14)	-2.98	(2.00)
Land Size	0.00	(0.00)	0.00	(0.00)
Total Population	-0.00	(0.00)	-0.00	(0.00)
Population Density	0.00	(0.01)	0.02	(0.08)
Urban Population	-0.00	(0.01)	-0.11	(0.13)
Urban Pop. Growth	-0.03	(0.04)	-0.20	(0.36)
Ethnic Fractionalization	-0.54	(0.31)	-6.85	(4.81)
British Colony	0.36	(0.44)	2.35	(7.71)
French Colony	0.38	(0.47)	2.62	(7.84)
Constant	0.23	(0.99)	0.45	(12.13)
σ	0.39		-	
Log. Likelihood	-		-8.69	
N	37		37	

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

We report both OLS and Logit estimates of the determinants of rural insurgency in Table 3. As it is shown, the effect of percentage of mountains on rural insurgency is negative and statistically

significant across specifications. Note that other covariates of interest, such as the number of jurisdictional hierarchies beyond the local community during pre-colonial times and the population size before independence, are not strong predictors of rural insurgency. The data suggests that topography matters more than anything else.

The 2SLS and G2SLS random-effects IV estimates are reported in Table 4. As we can see, these results confirm the hypothesis of rural insurgency having a negative and statistically significant impact on democratic development after 1989. In fact, IV-2SLS coefficient estimates on rural insurgency are even stronger than those estimated via OLS. Experience of this particular kind of insurgency decreases Polity IV scores about 5 points in a 20-point scale.

Other covariates that seem to be strong predictors of democracy levels are GDP (positive effect), Oil (negative), New States (positive), and Political Instability (positive). While the effects of GDP and Oil confirm what has been suggested in other studies, it is not evident why newly created states and political instability are positively correlated with democracy. One possible explanation is that newly created states tend to be democratic in origin, even if they turn autocratic rapidly. Likewise, it might be the case that in the African context, democracies tend to be less politically stable than autocratic regimes.

5.1.1 Potential Violations of the Exclusion Restriction

If the mountainous terrain instrument is exogenous, it has to satisfy the exclusion restriction. In other words, mountains should affect democracy outcomes only through rural insurgency. There are at least two reasonable ways to test this. First, we could estimate whether mountainous terrain affects democracy through channels other than rural insurgency: e.g., economic growth, social inequalities, or uneven access to resources, among others. Second, we could test whether mountainous terrain is correlated with degree of democracy in countries, or even regions of the world, that did not experience major rural insurgencies. Since it is not intuitively clear how percentage of mountains could affect democracy through other channels, we follow the second approach.

Table 4: IV-2SLS & IV-G2SLS Random-Effects Estimates of the Determinants of Democracy

DV: Polity IV	c.1960-2000		c.1960-1989		1990-2000	
	IV-2SLS	IV-G2SLS RE	IV-2SLS	IV-G2SLS RE	IV-2SLS	IV-G2SLS RE
Rural Insurgency instrumented by mountains	-3.747 (2.252)	-3.329 (2.315)	-2.776 (2.433)	-2.908 (2.596)	-5.631** (2.629)	-5.400** (2.638)
Lagged GDP	2.707*** (0.992)	2.454** (1.010)	2.535** (1.083)	2.654** (1.066)	2.540** (1.145)	2.366* (1.186)
Population	0.0149 (0.575)	-0.217 (0.622)	-0.154 (0.613)	-0.157 (0.642)	-0.250 (0.703)	-0.322 (0.725)
British Colony	0.965 (1.579)	1.281 (1.502)	3.048** (1.453)	2.957* (1.474)	-2.912 (2.221)	-2.821 (2.201)
French Colony	-1.064 (1.444)	-0.944 (1.266)	-0.453 (1.086)	-0.369 (1.085)	-1.435 (2.285)	-1.527 (2.194)
Oil Country	-3.534*** (1.148)	-3.098** (1.154)	-2.979** (1.210)	-2.753** (1.138)	-4.691*** (1.697)	-4.274** (1.741)
Religious Frac.	4.899 (3.143)	4.602 (3.165)	3.698 (2.771)	4.582 (2.933)	7.895 (5.227)	7.467 (5.182)
Ethnic Frac.	-2.454 (2.787)	-2.088 (2.790)	-2.259 (2.701)	-2.521 (2.929)	-1.936 (4.154)	-1.904 (4.101)
New State	3.837*** (0.917)	4.098*** (1.000)	4.199*** (0.886)	3.530*** (0.946)	7.923** (3.692)	9.917*** (3.336)
Instability	2.886*** (0.627)	1.904*** (0.578)	0.562 (0.720)	0.392 (0.800)	4.158*** (0.671)	3.540*** (0.687)
Lagged War	0.683 (0.752)	1.051 (0.698)	1.283 (0.827)	1.445 (0.864)	0.199 (1.294)	0.176 (1.367)
N. of Conflicts	1.801** (0.873)	0.912 (0.844)	1.657 (1.001)	1.938* (1.009)	0.206 (1.383)	0.0419 (1.360)
σ	4.896	4.609	4.309	4.293	4.948	4.795
N	1574	1574	1169	1169	405	405

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

In Table 5 we observe Ordinary Least Squares estimates of the effect of mountainous terrain on Polity IV scores covering the entire period 1960-2000. Three different subsets of the data were examined: all countries, countries that experienced urban insurgencies, and finally countries that experienced rural insurgencies. We control for the set covariates used in previous specifications. Similarly, we include time fixed effects in some specifications to capture time trends that may be related to democracy levels. To be concise, we do not report coefficient estimates on covariates and country-specific time trends.

Table 5: OLS Estimates of the Effect of Mountains on Democracy (1960-2000)

DV: Polity IV	All Countries		Urban Insurgencies		Rural Insurgencies	
	OLS	Random-Effects	OLS	Random-Effects	OLS	Random-Effects
Mountains (log)	-0.66* (0.39)	-0.58 (0.40)	-0.53 (0.57)	-0.55 (0.57)	-0.81** (0.35)	-0.87** (0.40)
Covariates	✓	✓	✓	✓	✓	✓
σ	4.78	4.49	4.80	4.39	4.16	3.99
N	1574	1574	878	878	696	696

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

As the results indicate, the percentage of mountains does not explain democracy in countries that did not experience rural insurgencies. Conversely, the percentage of mountains is negatively and significantly associated with democracy in countries that did experience rural insurgencies. This suggests the mountainous terrain instrument is exogenous, and hence, the exclusion restriction is satisfied: mountains seem to affect democratic consolidation in African countries only through the experience of a major rural insurgency during colonial times.

5.2 Micro Effects: Political Attitudes

At the individual level, our results provide evidence suggesting that rural insurgency is negatively related to democratic values and freedom of expression. While it seems that a legacy of rural anti-colonial insurgency boosts trust in political institutions, it is clear that citizens exposed to this treatment (or legacy) do not believe in electoral institutions and procedures.

For brevity, we only present coefficients and standard errors on our independent variable of interest (rural insurgency). We start with five models related to democratic vs. authoritarian views. As it is shown in Table 6, *ceteris paribus*, individuals exposed to a legacy of rural insurgency tend to have more autocratic views. They are more likely to support one-party rule, authoritarian leaders, and military governments.

Table 6: Ologit Estimates: Democratic vs. Authoritarian Views

	Support for One-Party Rule	Support for One-Man Rule	Support for Military Rule
Rural Insurgency	0.14*** (0.03)	0.17*** (0.03)	0.35*** (0.03)
Individual Controls	✓	✓	✓
Log Likelihood	-31412.15	-26987.42	-28954.73
N	24011	23616	23777

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

In Table 7, we report ordered logit estimates of the determinants of the three variables connected with freedom of expression. We observe negative and statistically significant effects of rural insurgency on freedom of speech, freedom of association, and freedom to vote. It seems that individuals from countries that experienced rural insurgencies during the colonial times tend to be more careful about what they say. This suggests that the traumatic effects of the repression of those anti-colonial movements persist across generations.

Table 7: Ologit Estimates: Freedom of Expression

	Freedom of Speech	Freedom of Association	Freedom to Vote
Rural Insurgency	-0.69*** (0.03)	-0.81*** (0.03)	-0.63*** (0.03)
Individual Controls	✓	✓	✓
Log Likelihood	-26592.49	-21586.73	-19076.29
N	24276	23936	24255

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 8 shows that rural insurgency positively affects trust in the president, the parliament, and the local government. Nonetheless, it seems that the effect on trust in the electoral institutions is negative and highly significant. It is not entirely clear why this is so, but one potential explanation is that citizens from urban-insurgency countries tend to punish their representatives (as in many industrialized democracies) much more than those from rural-insurgency countries.

Table 8: Ologit Estimates: Trust in Political Institutions

	Trust the President	Trust the Parliament	Trust the Electoral Inst.	Trust the Local Gov.
Rural Insurgency	0.07** (0.03)	0.23*** (0.03)	-0.30*** (0.03)	0.27*** (0.03)
Individual Controls	✓	✓	✓	✓
Log Likelihood	-30440.78	-30830.88	-30649.06	-31240.88
N	23492	23025	22599	23165

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

6 Rural Insurgency & Democratic Failure: Potential Mechanisms

Our results provide empirical evidence suggesting that rural insurgencies tend to generate autocratic governments in the long run, while urban insurgencies tend to lead to democratic institutions. The period c.1960-1989 is clearly difficult to explain, probably due to the instability of regimes across the continent. Nonetheless, it is worth noting the positive and statistically significant coefficient on British rule, which suggest that former British colonies were more likely to experience democracy (even if they were not stable regimes).

For the period 1990-2000, our interpretation of the results is that the effect of insurgency becomes significant when African countries became relatively free from foreign pressure of the Cold War period, that is, when domestic political actors could play a more significant role in shaping local institutions. In this regard, it would be interesting to test potential mechanisms through which the type of insurgency operated to institutionalize particular regime types. One interesting hypothesis is that urban insurgencies contributed to the strength of civil society organizations immediately after independence, and this enabled the development of democratic values as in the 19th century Europe.

On the other hand, rural insurgencies weakened civil society organizations after independence and this paved the way to autocratic rule.

To have a closer look at the potential mechanisms through which this institutional legacy may operate, we estimate the effects of rural insurgency on constitutional provisions that affected the composition and mode of election of the African legislatures during the period c.1960-1989. Table 9 shows logit estimates of the determinants of three outcome variables independently assessed: (1) a dummy variable for the existence of a legislature, (2) a dummy for the lower house of the legislature having been at least partly elected, and (3) a dummy indicating whether the mode of election of the legislature was direct or not. Since binary time-series-cross-section observations are likely to violate the independence assumption of the logit regression, we employ the remedy suggested by Beck, Katz, and Tucker (1998): we include a spell-identifier counter that marks the number of years since the last event of interest and three natural cubic splines. To save space, we do not report coefficients on covariates and cubic splines.

Table 9: Logit Estimates: Effects of Insurgency on Legislatures (c.1960-1989)

	Existence of a Legislature	At Least Partially Elected	Direct Mode of Election in LH
Rural Insurgency	-0.43 (0.34)	-0.52* (0.31)	-1.72** (0.85)
Covariates	✓	✓	✓
Three Cubic Splines	✓	✓	✓
Log Likelihood	-321.05	-354.12	-124.47
N	1102	1125	1037

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

As the data suggest, exposure to a legacy of rural insurgency may not have been a strong determinant of the existence of a legislature. The coefficient on is negative, but not statistically significant. Note, however, that the standard errors are not massively huge. We do observe statistically significant effects on the mode of election. Rural insurgency is negatively associated with having a legislature at least partly and directly elected. This suggests that countries that experienced urban social movements were more likely to create representative parliamentary institutions with direct modes of election. This is an interesting result that may help us understand how urban insurgencies

strengthened civil society actors, which in turn enabled the consolidation of democratic regimes in the long term.

Additionally, we estimate the effect of having experienced a rural insurgency on civil liberties. To do so, we use Barro’s transformation of Gastil, which maps the Gastil Civil Liberties onto a scale from 0 to 1. Unfortunately, this data is only available for the period 1970-2000. The results shown in Table 10 indicate that rural insurgency has a negative, and statistically significant effect across all specifications. This is indicative of how the way independence movements were conducted affected civic culture and democratic values in first place, and hence, influenced the creation of democratic institutions. While the effect of rural insurgency on democracy scores is not significant for the period immediately after independence (c.1960-1989), we find that countries that experienced major rural anti-colonial insurgencies tended to restrict civil liberties by -0.18 points, in a 0-1 scale, during the same period of time.

Table 10: Estimates of the Effect of Rural Insurgency on Civil Liberties

	c.1970-2000		c.1970-1989		1990-2000	
DV: Civil Liberties	IV-2SLS	IV-G2SLS RE	IV-2SLS	IV-G2SLS RE	IV-2SLS	IV-G2SLS RE
Mountains (log)	-0.25*** (0.05)	-0.23*** (0.05)	-0.18*** (0.05)	-0.18*** (0.05)	-0.44*** (0.12)	-0.44*** (0.12)
Covariates	✓	✓	✓	✓	✓	✓
σ	0.18	0.18	0.17	0.17	0.19	0.20
N	850	850	640	640	210	210

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 11 summarizes the results from Tables 5 and 6 for the period 1970-1989, and shows OLS and random-effects estimates of democracy (polity IV) controlling for the set of covariates included in previous specifications, plus lagged measures of the potential mechanisms we have described above, that is, existence of a legislature, existence of a legislature at least partially elected, existence of direct mode of election in the Lower House, and civil liberties. The results suggest that rural insurgency does not have a statistically significant effect on democracy in this particular period of time, while the index of civil liberties seems to be a strong predictor of democracy. The existence of

a legislature at least partially elected seems to be positively associated with democracy too. Again, we find these results indicative of how the institutional legacy of independence movements affected civic culture first, and then lead to the consolidation of either democratic or autocratic institutions.

Table 11: Legislatures., Civil Liberties, & Democracy (1970-1989)

Dep Vars:	Exist. Leg.	Partially Elec.	Direct Mode	Civ. Lib.	Democracy (Polity IV)	
	Logit	Logit	Logit	Random-Effects	OLS	Random-Effects
Rural Insurgency	-0.43 (0.34)	-0.52* (0.31)	-1.72** (0.85)	-0.18*** (0.05)	-1.70 (1.21)	-0.31 (1.61)
L.Existence of Leg.	-	-	-	-	-6.41*** (1.72)	-1.32*** (0.42)
L.Partially Elec.	-	-	-	-	6.91*** (1.81)	2.31*** (0.72)
L.Direct Mode	-	-	-	-	1.39 (1.06)	1.01 (1.34)
L.Civil Liberties	-	-	-	-	18.64*** (2.87)	7.63*** (2.15)
Covariates	✓	✓	✓	✓	✓	✓
N	850	850	640	640	210	210

Clustered standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

7 Conclusion

Our results have important implications for the understanding of the historical determinants of political institutions and democratic culture in Africa. We have shown that the legacy of anti-colonial insurgencies has a long-term impact on institutional development. Countries that experienced major rural uprisings tend to be more autocratic and unstable, while those in which anti-colonialism was channeled through urban insurgency tactics tend to be more democratic. Likewise, when analyzing the micro-level effects, we found that individuals from countries that experienced rural uprisings tend to have more autocratic views, and lower levels of freedom of expression and trust in electoral institutions. This suggests the effects anti-colonial movements persist across generations. Finally, it is of particular importance that the institutional change immediately after independence does not seem to be correlated with the way anti-colonial movements were organized. The effect of rural insurgency on democratic development becomes visible until the last decade of the 20th century.

References

- [1] Acemoglu, Daron, and James A. Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. New York and Cambridge: Cambridge University Press.
- [2] Acemoglu, Daron, Simon Johnson, James A. Robinson and Pierre Yared. 2008. "Income and Democracy." *American Economic Review*, 98(3): 808–42.
- [3] Acemoglu et al. 2009. "Reevaluating the Modernization Hypothesis." *Journal of Monetary Economics* 56: 1043–1058
- [4] Arthur, W. Brian. 1994. *Increasing Returns and Path Dependence in the Economy*. Ann Arbor: University of Michigan Press.
- [5] Althabe, G. 1969. *Oppression et libération dans l'imaginaire*. Paris: Maspéro.
- [6] Benhabib, Jess, Alejandro Corvalan, and Mark M. Spiegel. 2011. "Reestablishing the Income-Democracy Nexus". NBER Working Paper.
- [7] Bratton, Michael and Nicolas van de Walle. 1997. *Democratic Experiments in Africa: Regime Transitions in Comparative Perspective*. Cambridge, England: Cambridge University Press.
- [8] Boix, Carles. 2003. *Democracy and Redistribution*. New York: Cambridge University Press.
- [9] Cole, Jennifer. 1998. "The Work of Memory in Madagascar". *American Ethnologist* 25(4): 610–633.
- [10] Cooper, Frederic. 1996. *Decolonization and African Society: The Labor Question and in French and British Africa*. Cambridge: Cambridge University Press.
- [11] Cooper, Frederick, 2008. "Possibility and Constraint: African Independence in Historical Perspective." *Journal of African History* 49 pp. 167-96
- [12] Dahl, Robert Alan. 2000. *On Democracy*. New Heaven, MA: Yale University Press.
- [13] Decalo, Samuel. 1992. "The Process, the Prospects and the Constraints of Democratization in Africa". *African Affairs*, 91, 7-35
- [14] Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97: 75–90.
- [15] Huntington, Samuel P. 1993. *The Third Wave: Democratization in the Late Twentieth Century*. Oklahoma: University of Oklahoma Press.
- [16] Glaeser, Edward, Giacomo Ponzetto and Andrei Shleifer. 2007. "Why Does Democracy Need Education?" *Journal of Economic Growth* 12(2): 77-99.

- [17] Jensen, Nathan and Leonard Wantchekon. 2004. "Resource Wealth and Political Regimes in Africa." *Comparative Political Studies*. 37(7):816-841.
- [18] Joseph, Richard, 1997. "Democratization in Africa After 1989. Comparative and Theoretical Perspectives". *Comparative Politics*. Vol. 29, No 3.
- [19] Lipset, Seymour Martin, Martin Trow and James S. Coleman. 1956. *Union Democracy: The Internal Politics of the International Typographical Union*. New York Free Press.
- [20] Lipset, Martin Seymour. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review*, 53(1): 69- 105.
- [21] Lipset, Martin Seymour. 1994. "The Social Requisites of Democracy Revisited." *American Sociological Review*. 59(1): 1-22.
- [22] Murdock, George Peter. 1959. *Africa: Its Peoples and Their Cultural History*. New York: McGraw-Hill Book Company.
- [23] Pierson, Paul. 2000. "Increasing Returns, Path Dependence, and the Study of Politics." *American Political Science Review* 94: 251-267
- [24] Plumper, Thomas and Vera E. Troeger. 2007. "Efficient Estimation of Time Invariant and Rarely Changing Variables in Panel Data Analysis with Unit Effects" *Political Analysis*.
- [25] Przeworski, Adam and Fernando Limongi. 1997. "Modernization: Theories and Facts." *World Politics*. 49:155-183.
- [26] Przeworski, Adam, et al. 2000. *Democracy and Development: Political Institutions and Well-Being in the World 1950-1990*. New York: Cambridge University Press.
- [27] Przeworski, Adam, et al. 2010. *Dataset of Political Variables*.
- [28] Mamdani, Mahmood. 1990. "The Social Basis of Constitutionalism in Africa" *Journal of Modern African Studies*, 28, 3 pp. 359-374
- [29] Ross, Michael L. 2001. "Does Oil Hinder Democracy?" *World Politics*. 53(1): 225-361.
- [30] Rueschemeyer, Dietrich, Evelyn Huber Stephens and John D. Stephens. 1992. "Capitalist Development and Democracy." *American Political Science Review*. 86(4): 1028-1034.
- [31] Wantchekon, Leonard and Omar García-Ponce. 2011. "Echoes of Colonial Repression: The Long-Term Effects of the 1947 Uprising on Political Attitudes in Madagascar". NYU Working Paper.