Institutions in African history and development: A review essay

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INSTITUTIONS IN AFRICAN HISTORY AND DEVELOPMENT: A REVIEW ESSAY

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Abstract. In this review, I discuss the role of African institutions in general and pre-colonial institutions in particular in explaining present-day African poverty. Six of the most often cited explanations of African poverty – geography, ethnolinguistic fractionalization, the slave trades, colonial rule, underdevelopment, and failed aid – operate largely through institutions. Bad institutions themselves directly affect modern growth. Pre-colonial institutions also matter for present-day outcomes. I look at four broad institutional types (land tenure, slavery, polygyny and states), outline influential theories that explain why they took the shapes they did before colonial rule, and why they matter to Africa today.

1. Introduction

In the latest edition of the *CIA World Factbook*, 25 of the 30 poorest countries on Earth are African. Using its 2009 PPP-adjusted GDP per capita of $1900 as a yardstick, the North Korean basket case is twice as well off as Ethiopia, Mozambique, Togo, Sierra Leone, or Malawi. It is three times as wealthy as Guinea-Bissau, Somalia, or Liberia, more than six times as rich as Burundi or the Democratic Republic of the Congo, and nearly ten times as productive as Zimbabwe. The *Factbook* also estimates that 63% of North Korea's population is urban, versus 48% in Nigeria, 38% in Sierra Leone, 25% in Lesotho, and 10% in Burundi. According to the UN, life expectancy at birth in North Korea is 67.3, just above the world average. In Nigeria it is 46.9. In Swaziland it is 39.6. The UN estimates child mortality under five at 62.4 per 1000 live births in North Korea. More than 40 African countries are doing worse; in Botswana, this rate is 67.5; in Ghana, 89.6; in Liberia, 205.2; in Sierra Leone, 278.1. African economic failure needs explanation.

In this paper, I focus on one particular cause of African poverty – institutions. Figure 1 plots the results of an OLS regression of log per capita GDP in 1995 against the Acemoglu et al. (2001) "expropriation risk" measure of institutional quality. The correlation is strong and positive, and the R^2 of this regression is 0.62. African countries are indicated with a

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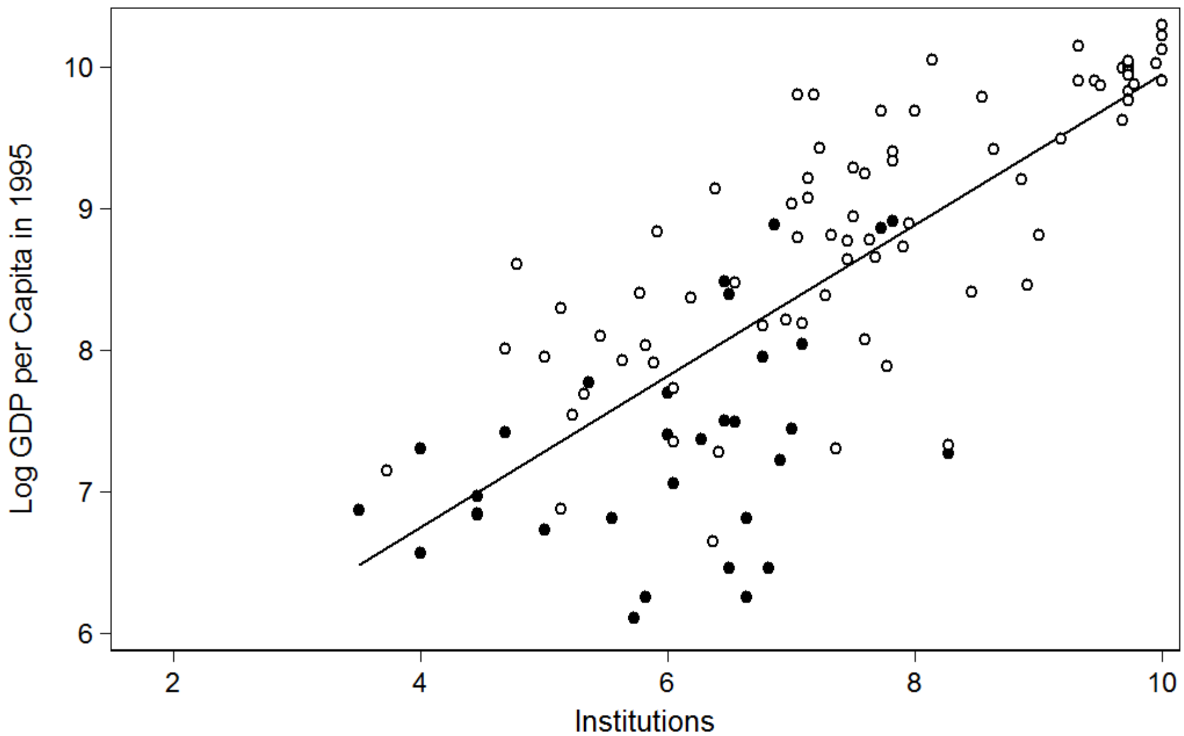
Figure 1. Institutional quality and economic performance



Institutions are the measure of expropriation risk from Acemoglu et al. (2001). African countries are indicated by a shaded marker.

shaded marker; it is clear from the figure that African countries have both low levels of GDP and poor protection against expropriation. In the Acemoglu et al. (2001) sample, the average country has a score of 7.07 on this index. The average African country scores 5.79, below the 25^{th} percentile of 5.89. 78% of countries below the 10^{th} percentile are African. Adding a (statistically significant) "Africa dummy" to the regression does not eliminate the impact of institutional quality, and the R^2 rises to 0.71. While bad institutions do not explain the entire difference in performance between Africa and the rest of the world, they do explain a substantial fraction of it.

Institutions are, in Douglass North's famous phrase, "the humanly devised constraints that structure human interaction. They are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions, and self imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies." The cross-country growth literature on institutions has settled on some broader measures of institutional quality as important drivers of growth – protection against expropriation (Acemoglu et al., 2001), property rights (Acemoglu and Johnson, 2005), rule of law (Rodrik et al., 2004), investor protections and legal origin (Porta et al., 1997), although surprisingly the net effect of democracy itself on growth may be weakly negative (Barro, 1996; Tavares and Wacziarg, 2001). In Africa, the weakness of the state as an institution has been identified as a major source of policies detrimental to growth (Bates, 1984; Collier and Gunning, 1999).

In this paper, I discuss the importance of institutions to African poverty, but with an historical focus. In Section 2, I situate the study of African institutions in the context of two literatures on African economic history – one "old" and one "new." In Section 3, I discuss some of the major factors that have been used to explain Africa's "Growth Tragedy," and show that many of these operate directly or indirectly through institutions. I consider geography, ethnolinguistic fractionalization, the slave trades, colonial rule, underdevelopment, and failed aid. In Section 4, I describe some of the theories that have been used to explain the nature of four broader institutions – land tenure, slavery, polygyny, and states. While having their roots in the pre-colonial period, each of these institutions matters in the present. In Section 5, I conclude.

2. The "old" and "new" economic histories of Africa

McPhee's (1926) *Economic Revolution in British West Africa* is often pointed to as the first academic study of Africa's economic history. While many of his conclusions remain valid today, his book suffered from the colonial prejudice that African economies were spurred to life by intervention from outside, and so he overemphasized the discontinuity in economic change brought about by the first twenty years of British rule in West Africa. Fage (1971) surveys writing on the history of West Africa that occurred between the start of the colonial period and the establishment of history departments in West African universities from 1948 onwards. During these years, professional imperial historians, social anthropologists, and other white authors had practical reasons for studying the histories of their subject peoples, since knowledge was necessary for indirect rule to function and materials were needed for classrooms in the colonies.

For most Africanists, though, it is Dike's 1956 *Trade and politics in the Niger Delta* that marks the beginning of the study of historical change in African economies. Political and economic history were favored subjects of the early pioneers of the academic study of African history – Fage (1955), Ryder (1969), Biobaku (1957), and Davidson (1961) (among others) gave substantial attention to economic questions. Throughout the 1960s, 1970s, and 1980s, historians such as Ralph Austen, Anthony Hopkins, Martin Klein, Robin Law, Paul Lovejoy, Suzanne Miers, Richard Roberts, and the members of the Ibadan School wrote Africa's economic history. While some, notably David Eltis, Jan Hogendorn, and Patrick Manning, were economists or employed tools from economics, this was largely an "old economic history," relying on qualitative accounts and pulling together sparse sources of descriptive statistics to uncover the working of African economies in the past.

In a recent paper for the *Journal of African History*, Hopkins (2009) writes that the economic history of Africa by the close of the 1980s "was in failing health; in the 1990s its public appearances were limited." He explains this by invoking the general decline of economic history and the rise of postmodernism. Historians have turned to focus more on social and cultural history than on economic subjects. It is not that there has been no work since 1990; the collected studies in Law (1995) and the synthesis by Lynn (1997) have added to our knowledge about economic transformation between the abolition of the Atlantic slave trade and the advent of colonial rule. Austin (2005) has provided an economic history of Asante. In many cases, however, the "old" economic history has been subsumed within other works that focus on the economic, social and political histories of particular places (e.g. Mann (2007) on Lagos) or subjects (e.g. Klein (1998) on slavery in French West Africa). Notably, the relatively new literature on African environmental history (Beinart, 2000; Fairhead and Leach, 1996; Harms, 1987; Kreike, 1996; McCann, 1999) is inseparable from the economies of the peoples who have transformed the continent's landscape.

Hopkins (2009) notes that, while historians have turned from the subject, economists have spent the past decade writing "a new type of economic history of Africa." While this is true, Hopkins (2009) errs in identifying the "reversal of fortune" thesis of Acemoglu et al. (2002b) and (apparently) Nunn (2008) and the "ethnolinguistic fractionalization" thesis of Easterly and Levine (1997) as the twin forefronts of this literature. While his focus is on "big ideas," what sets "new" economic history apart is its particular methods. In the past decade, a collection of careful econometric studies have made incremental and credible contributions to our understanding of African economic history.

Writers such as Price (2003) and Bertocchi and Canova (2002) have found a relationship between colonial heritage and present-day economic performance, while Englebert (2000a) and Gennaioli and Rainer (2007) have made cases that pre-colonial states also matter for modern growth. Bolt and Bezemer (2009) and Huillery (2009) have uncovered statistical relationships between colonial-era investments in health and education and modern outcomes. Recent papers by Moradi (2009) and Austin et al. (2009) have looked at colonial anthropometric history. Bubb (2009) searches for differences on opposite sides of the border between Ghana and Côte d'Ivoire. Huillery (2008) has studied the relationship between European settlement and modern wellbeing within French West Africa. Nunn (2008), Nunn and Wantchekon (2008), and Whatley and Gillezeau (2009) have used econometric techniques to study the causal impacts of Africa's slave trades. Bezemer et al. (2009) have turned their attention to the long-term consequences of indigenous African slavery. Nunn (2010) demonstrates a link between the location of colonial-era mission stations and current religious attitudes. These papers and other similar contributions are those to which Hopkins (2009) should have looked in seeking the "new economic history" of the African continent.

These contributions have gone unnoticed by historians of Africa because their methods and topics do not speak to recent trends in history, because the culture of circulating working papers common to economics is rare in history, and because many of these studies do not see themselves as part of the tradition that leads from McPhee (1926) to the present. Instead, they situate themselves within the economic literature on the importance of institutions and path dependence recently surveyed by Nunn (2009). This includes work by Banerjee and Iyer (2005) and Iyer (2008) on the long reach of colonial rule in India, or Dell (2009) on the *mita* system in Peru. In this review essay, I attempt to draw both these "old" and "new" economic histories of Africa together, to understand the role of institutions in explaining the continent's poverty.

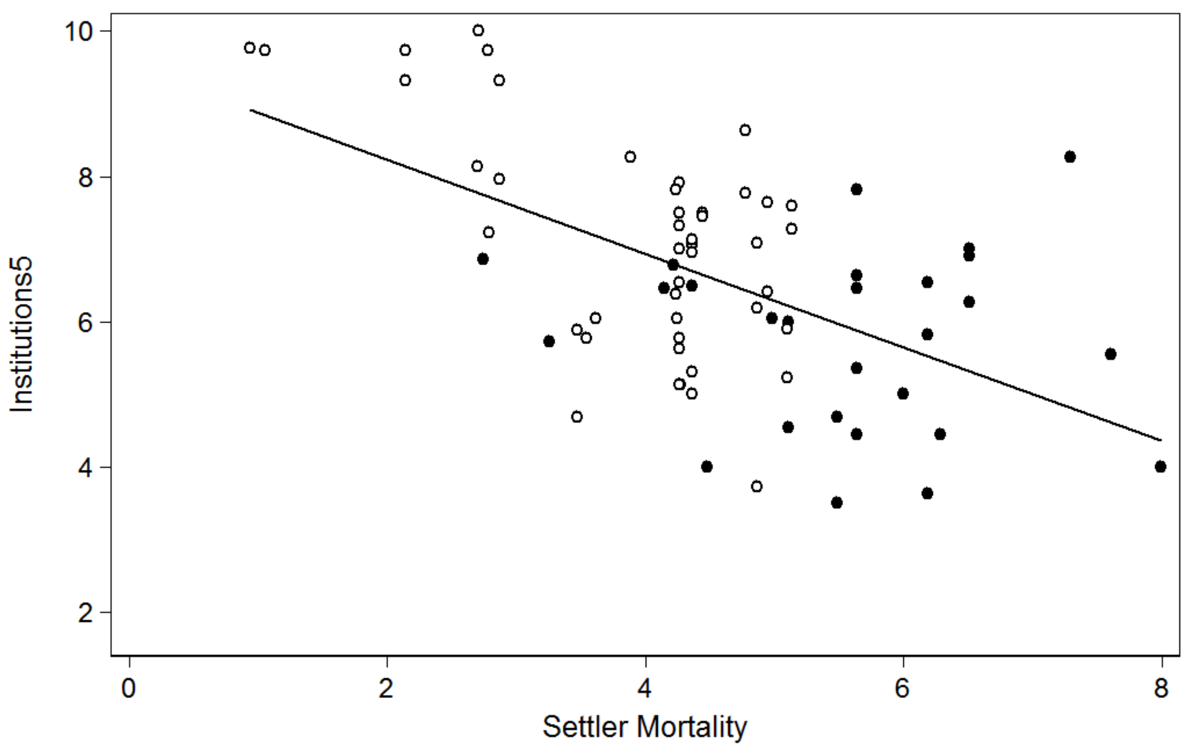
3. Why is Africa poor?

In a cross-country growth regression using 79 African and non-African developing countries as their sample, Sachs and Warner (1997) achieve an R^2 of 0.89 with only eleven variables – initial GDP per capita, trade openness, openness interacted with initial GDP, landlockedness, initial life expectancy and its square, central government saving, a tropical climate dummy, institutional quality, the share of natural resource exports in GDP, and the growth rate of the economically active share of the population. With this specification, there is no significant "Africa dummy"; the same factors that explain growth in the rest of the world explain its absence in Africa.

The "Africa dummy" was first noted by Barro (1991). Jerven (2009a) has suggested that this variable masks change over time in African economic performance. While the continent's GDP per capita was roughly one sixth that of the rest of the world in 1960, African growth rates did not fall behind until after 1975. Poor institutional quality in Africa may, then, be the result of this post-1975 collapse. The most powerful instrument for institutions in the literature – the settler mortality measure of Acemoglu et al. (2001) – can explain differences between institutions in Africa and the rest of the world, but not differences within Africa, as Figures 2 and 3 show. The correlation coefficient within Africa is -0.12, while it is -0.55 for their whole sample.

One can use the estimates constructed by Nunn (2008) to provide suggestive evidence that differences in institutions can explain the relative performance of African countries. He shows that slave exports negatively predict both state centralization and ethnolinguistic fractionalization. The causal impact of the slave trade on both is robust to the use of his instrumental variables strategy, though the effect on state centralization disappears once additional geographic controls are added.[1] Table 1 shows that his estimate of slave exports has a causal effect on the quality of modern institutions; Column (1) is the same as column [4] of Table IV in his paper, except that humidity is excluded and standard errors are now robust to heteroskedasticity. Column (2) uses the same IV approach with modern institutions as an outcome, and shows that the impact of slavery is causal. If it can be supposed that the effects of the slave trade work solely through institutions, then Column (3) shows that, even within Africa, the impact of institutions on growth is causal even within Sub-Saharan Africa. The sample size is small and this is an admittedly restrictive exclusion assumption, but the results are suggestive.

FIGURE 2. Settler mortality and institutions

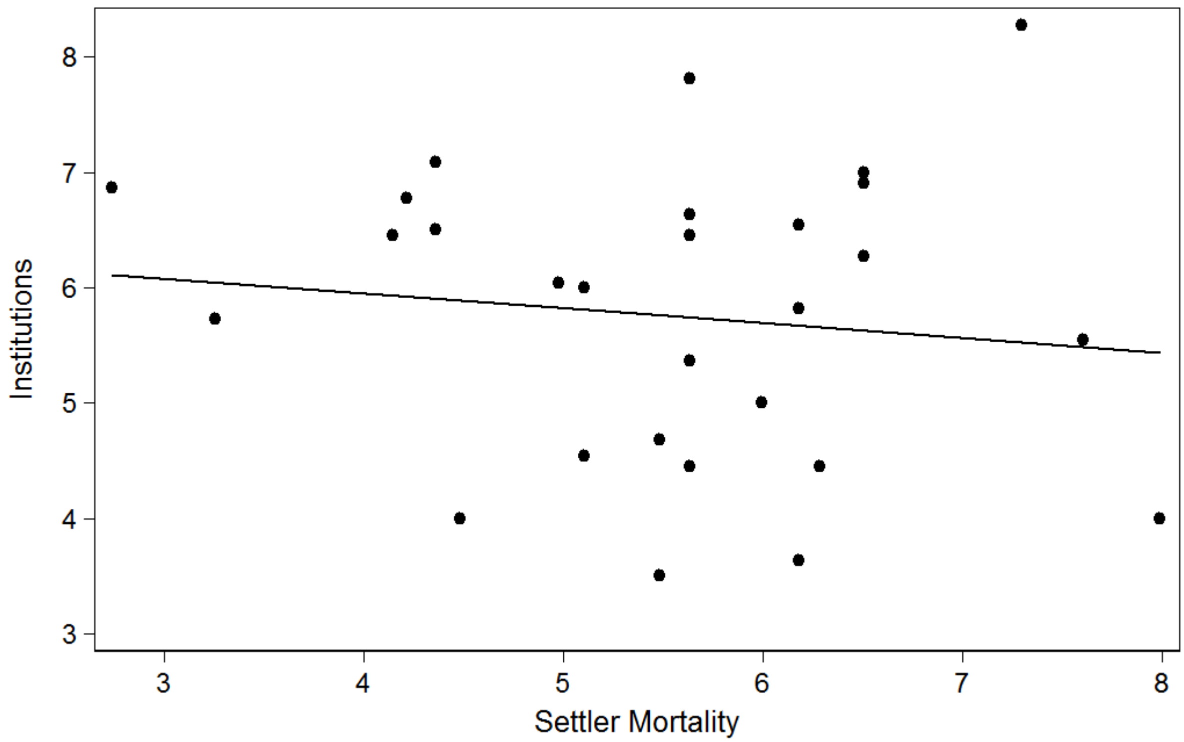


Institutions are the measure of expropriation risk from Acemoglu et al. (2001). African countries are indicated by a shaded marker.

The present section outlines briefly seven explanations of current African poverty – geography, ethnolinguistic fractionalization, the slave trades, colonial rule, underdevelopment, ineffective foreign aid, and institutional failures. Some of these are on the list given by Sachs and Warner (1997), others operate through their more summary measures, and some have been found to be important by other researchers. The focus of this paper on institutions

[1] I do not report these results, but they can be shown easily using the data available on his website.

FIGURE 3. Settler mortality and institutions within Africa



Institutions are the measure of expropriation risk from Acemoglu et al. (2001).

is justified by the empirical findings that many of these factors are either mitigated by or operate entirely through the quality of institutions.

3.1. **Geography.** Birchenall (2009) shows that urbanization, a common proxy for economic development, was lower in Africa in 1500 than in other pre-industrial societies. This suggests a powerful role for very long-term factors, including geography, in explaining the continent's status today. "At the root of Africa's poverty," charge Bloom and Sachs (1998), "lies its extraordinarily disadvantageous geography." They argue that Africa's climate, fragile soils, and human and plant diseases have saddled it with low agricultural productivity, high disease burdens, low levels of trade concentrated in primary commodities, short life expectancies, and unfavorable youth dependency ratios. In particular, Gallup and Sachs (2001) estimate that reducing malaria risk by 10% would raise growth by 0.3%. For Collier (2006), the critical feature of Africa's geography is the unusual concentration of roughly one third of its population into resource-poor landlocked countries; only 1% of the population of the rest of the developing world is in a similar situation. To make matters worse, rainfall has been declining in Africa since at least the 1960s; Barrios et al. (2010) estimate that, if this had

TABLE 1. The causal impact of institutions

	(1)	(2)	(3)
	Log GDP per Capita, 2000	*Institutions*	*Log GDP per Capita, 2000*
Ln(Slaves/Area)	-0.24***	-0.36**	
	(0.083)	(0.182)	
Institutions			0.33**
			(0.166)
Observations	42	30	30
Other Controls	Yes	Yes	Yes
Restricted Sample	Yes	Yes	Yes
F-Stat	1.734	2.070	5.599

Notes: ***Significant at 1%, **Significant at 5%, *Significant at 10%. All regressions are IV, with robust standard errors reported. The excluded instruments (for slave exports in columns (1) and (2), and institutions in column (3)) are are the minimum distances from the nearest slave ports of four the Atlantic, Indian Ocean, Saharan and Red Sea slave trades. These, along with slave exports, colonizer dummies and geographic controls are taken from Nunn (2008), while institutions are the expropriation risk measure from Acemoglu et al. (2001). Other controls include colonizer dummies, distance from equator, longitude, lowest monthly rainfall, avg min temperature, and ln(coastline/area). The restricted sample excludes islands and North Africa.

not happened, the income gap between Africa and non-African developing countries would be between 9% and 23% smaller today.

The effects of geography on African growth are both direct and indirect, since the environment has also shaped African history.[2] Diamond (1997) argues that the continent's North-South orientation slowed the Bantu expansion and the diffusion of agricultural technologies, delaying the Neolithic revolution, the timing of which Putterman (2008) has shown predicts modern economic performance. Nunn and Puga (2007) demonstrate that, while ruggedness inhibits modern economic performance by raising transportation costs and lowering agricultural productivity, rugged terrain in Africa helped its inhabitants resist the slave trades and their long-term negative institutional consequences.

For Collier (2007), the impact of geography is mediated by institutions. The large share of Africa's population that lives in landlocked countries is already at a disadvantage, but this is made worse by dysfunctional neighbors who do not invest in transportation infrastructure, have poor policies, and cannot serve as reliable export markets. Similarly, Collier (2006) suggests that (geographically determined) low population sizes in Africa have inhibited economic turnarounds; a financial press is harder to support, skills are scarce, and failure to achieve scale economies in state security increases the chance of civil war.

[2]McCann (1999) provides an early review of the environmental history literature on Africa.

The possible benefits of the continent's resources are also mitigated by institutions. Many of Africa's natural endowments are "point resources," such as oil, gas, diamonds, and precious metals; the literature on the natural resource curse demonstrates that, in already weak institutional environments, these endowments promote Dutch disease, corruption, conflict and instability rather than development (e.g. Isham et al. (2005)). The "red rubber" period in the Congo (Hochschild, 1998) and the more recent publicity given to "blood diamonds" (Campbell, 2004) stand out as particularly egregious examples. Garcia and Robinson (2009) argue, similarly, that historical "frontiers" positively predict modern income in countries of the Americas where there were constraints on the executive in 1850, but not where these constraints were absent. Though they do not consider Africa, the frontier is a major theme in African history (Kopytoff, 1987).

Geography also shapes institutions directly. Acemoglu et al. (2001) have famously argued that the mortality of European settlers determined whether colonies became "neo-Europes" or were burdened with extractive institutions. Hall and Jones (1999) show that distance from the equator is a negative predictor of "social infrastructure," a combination of law and order, bureaucratic quality, corruption, risk of expropriation, government repudiation of contracts, and openness to trade. In standard trade models, larger, distant, and landlocked countries are expected to trade less; Frankel and Romer (1999) show that the level of trade predicted by geography also predicts openness to trade.

Wilks (1993) links the existence of matriliny in Asante to the high peak labor demands needed to farm in the forest environment; Ferrara (2007) shows that this matriliny matters today, as sons give greater transfers to their fathers when a male nephew exists as a rival heir. Similarly, Ferrara (2003) demonstrates that kinship links in Ghana make it possible for lenders to use the borrower's child to punish default, either by having the child withhold transfers or preventing other lenders from making loans to the child. Below, I will discuss geographic explanations of the nature of African states. Easterly and Levine (2003) argue even more forcefully that geography matters *only* through institutions, using an overidentification test to show that settler mortality, latitude, landlocked-ness, and crop/mineral endowments do not explain modern GDP except via institutions.

3.2. **Ethnolinguistic fractionalization.** African ethnic diversity is unusually high; using the standard index computed from the Soviet *Atlas Narodov Mira*, the fifteen most fractionalized countries in the world are African. There are three sources of this diversity. First, African genetic diversity is also very high, since people have been living in Africa the longest. Ramachandran et al. (2005) show that heterozygosity has a very tight and negative correlation with migratory distance "out of [East] Africa." Second, the borders of African states were externally imposed with almost no regard for the homogeneity of the populations created. Third, history has not worked to homogenize African populations. Mamdani (2001), for example, has documented how the identities of Hutu and Tutsi were made rigid as a consequence of Belgian rule. Tignor (1993) demonstrates how British rulers stoked animosity between Northern and Southern Nigerians in the lead-up to independence. By contrast, Posner (2003) demonstrates that missionary activity, colonial education, and labor migration consolidated the "Babel of more than fifty languages" in Zambia so that, by independence, nearly 80% of the population spoke one of the four main tongues. Green (2010) shows that the strongest predictors of ethnic diversity in Africa today are temperature, state size, and (negatively) urbanization. Slave exports also predict diversity, though its significance is marginal.

This diversity has been shown empirically to be bad for growth. Easterly and Levine (1997) demonstrate that ethnolinguistic fractionalization has a modest negative effect on growth. More importantly, it predicts the under-provision of public goods and the adoption of bad policies. Posner (2004a) shows that this effect becomes even stronger when the measure is restricted to politically relevant groups. This holds even within countries; schools in the more ethnically diverse parts of western Kenya receive less funding and have worse facilities (Miguel and Gugerty, 2005).

Ashraf and Galor (2008) suggest that these impacts have a genetic basis. Genetic homogeneity, predicted by migratory distance from Addis Ababa, has a robust and non-monotonic relationship with development in 1500 AD. They posit that at low levels of diversity, increasing diversity makes it easier to accumulate complementary human capital and to adopt new technologies. At higher levels, however, greater diversity leads to mis-coordination and distrust. Alesina and Ferrara (2005) suggest that diversity has benefits and costs that operate through individuals' preferences, their strategies, and through the production function. For them, the benefit of diversity is in facilitating variety in production, an effect most pronounced at already high levels of output (an effect they demonstrate using the revised measure of fractionalization from Alesina et al. (2003)). The cost is that it is difficult to agree on policies and provide public goods. For Knack and Keefer (1997), fractionalization inhibits trust between individuals, which restricts growth. Mauro (1995), similarly, finds that it raises corruption, thereby lowering investment.

Ethnicity and race affect individuals' economic decisions. Bigsten et al. (2000) show that African-owned small manufacturers in Kenya are more likely than Asian-owned firms to chose informal over formal status. Fafchamps (2000) finds that black entrepreneurs in Kenya and Zimbabwe face no disadvantages in obtaining bank credit, but do have difficulties acquiring supplier credit. He interprets this to mean that they are penalized in for their lack of network connections with the businesses community. Habyarimana et al. (2007) conduct an experiment in Kampala to show that ethnicity affects economic outcomes through strategic behavior, more than through technology or preferences. Within their sample, preferences for public goods are uncorrelated with ethnicity. Participants' offers in an anonymous dictator game are no larger to their co-ethnics than to others. Similarly, co-ethnics performed no better on a cooperative puzzle-solving game than other pairs. In a non-anonymous dictator game, however, their offers are larger to co-ethnics.

Posner (2005) has shown that the operation of ethnic cleavages is mediated by institutions. He constructs a simple model of coalition formation in Zambia, in which voters attempt to form the smallest winning coalition in order to extract resources using the state. Under multiparty democracy, the focus of politics is national, and voters emphasize their linguistic identities. Under single party rule, politics is local, and becomes about "tribal" identities. Eifert et al. (2010) find that "ethnic" identification increases at the expense of class and occupational identification as a competitive presidential election nears – ethnicity matters because it is politically salient. In Malawi, Posner (2004b) argues that Chewas and Tumbukas are adversaries because they are both large enough to form bases for political coalitions; in Zambia, both groups are small, and they are political allies. Miguel (2004), similarly, suggests that nation-building efforts in Tanzania have been successful at overcoming the negative effects of diversity. While ethnic diversity predicts poor outcomes for Kenyan schools, it does not do so for Tanzanian schools. Dunning and Harrison (2010) find in Mali that "cousinage" ties that cross-cut ethnicity help explain why ethnic identity is unimportant in that country; in their experiment, participants rated political speeches more highly if the politician's surname indicated cousinage with the respondant, even if he was from another ethnic group.

This conclusion also holds in cross-country growth regressions; Easterly (2001) demonstrates that including an interaction term between fractionalization and institutions does not eliminate the direct effect of fractionalization on schooling, assassinations, financial depth and several other variables, but does substantially weaken it. Collier (2003), by contrast, finds that interacting fractionalization with political rights completely eliminates its main effect. The policy implications of this interpretation are stark; rather than advocating separation of ethnic groups in order to quell conflict, Habyarimana et al. (2008) advocate strategies such as Nyerere's imposition of Swahili as the national language in Tanzania that break down barriers to cooperation.

3.3. **The slave trades.** Empirical studies have begun to explore the effects of the Atlantic, Red Sea, Saharan, and Indian Ocean slave trades on Africa, building on a much older historical literature. These earlier studies focused on four major themes – underdevelopment, states, institutions, and demographics. Rodney (1974) is the most notable proponent of the view that Europe "underdeveloped" Africa. To him, an already existing process of African development was interrupted and perverted by the slave trade. He argues that Africa was assigned the subordinate "role of supplier of human captives" in the emergent world trading system. Darity (1992) echoes this view, noting that the slave trade diverted the wealth of the African elite from production to exchange – to the export of productive capacity in the form of labor.

Inikori (1992) presents an alternative Marxist version of this thesis. The African superstructure adapted to facilitate the slave trade, but in so doing prevented the transition from subsistence to commerce. The slave trade prevented the development of capitalism in tropical Africa. Africa's comparative advantage in commodity production was eroded by the slave trade, as labor and skills were withdrawn. Inikori (2007) points out that, before the Atlantic slave trade, two centuries of trade with West Africa that had focused on the region's natural endowments – gold, red pepper, hides and skins, copper, ivory and redwood. This had contributed to commercialization and the development of a market economy. During the slave trade, firearms, textiles and alcohol came to dominate imports. Inter-regional trade and market activity contracted and violence became endemic, trapping the region in subsistence production.

The slave trade resulted in European imports entering the African economy, which Rodney (1974) argues adversely affected domestic production. Examining the composition of imports from Europe, however, Eltis (1987) contends that the imports of British textiles per person during the later decades of the slave trade were substantially less than during the period 1890-1914, during which a viable indigenous industry existed and successfully exported its surplus. Similarly, per-capita imports of firearms, tobacco, alcohol and gunpowder were smaller during the slave trade than they were during the late nineteenth century. Imports from the Atlantic trade could have taken up no more than 9% of West African incomes in his view, and probably accounted for "well below 5 percent." For "most regions and periods," he argues, the slave trade "was not a critically important influence over the course of African history."

One of the most important institutional legacies of the slave trades were their effect on states. Collins et al. (1968) point out that the accepted wisdom until the 1960s was that "the rise of the West African forest states was attributed to the wealth derived from the trade just as their fall was the result of moral decay from selling fellow Africans to European slavers," a view taken from the British abolitionists. This is how Fage (1955) explains the rise of Ashanti, Dahomey and Benin. Davidson (1961), in this vein, argues that the slave trade prospered in regions with strong rulers; where these did not exist, "it caused them to come into being." Thomas and Bean (1974), similarly, contend that the returns to scale for states taxing the slave trade may have spurred political consolidation during the eighteenth century. A contrary view, from Rodney (1974), notes that in many African traditions a ruler's power derives from his number of subjects; leaders were weakened by the depopulation that accompanied slave exports. States such as Matamba and Dahomey resisted the slave trade, yet both were eventually forced to submit to European power. The extent to which potential profits from slave raiding encouraged African states to go to war with their neighbors is controversial. Manning (1983) argues that this question can be answered by looking at the price elasticity of slave supply, which varied across states and periods.

While Nunn (2008) argues that the slave trades corrupted the judicial process in Africa, most work on the consequences for institutions other than the state itself have focused on slavery within Africa. Rodney (1966) argues that travelers make no references to the existence of 'domestic' slavery on the Upper Guinea Coast prior to the Atlantic slave trade, but that by the eighteenth century, slavery was widespread. Looking at the specific cases of West African gold and pepper, as well as commodity trade among the Yao near Malawi, Inikori (1982) adds that there is no evidence that commodity trade spurred the creation of states employing coerced labor. Lovejoy (2000), conversely, argues that the Atlantic slave trade induced a fundamental change from "lineage" or "domestic" modes of production to a "slave" mode, in which slaves were used in new activities and more intensively in old ones. The widespread use of slaves emerged in agriculture, mining, handicrafts, and livestock breeding.

The alternative to this "perverse institutions" argument is that the slave trades left behind beneficial institutions. Davidson (1961) describes in detail the bargaining process between European and African traders, and how this grew more efficient over time. Evans and Richardson (1995) note that, after 1700, slaves were captured for export from further and further inland. This necessitated the emergence of new long-distance trading networks, the proliferation of slave caravans, and the development of credit arrangements. This expansion may also have encouraged division between the enslavement and marketing functions, allowing coastal states to become more commercially oriented. They also note that competition over economic rents existed between those parties (including states) involved in the capture, transport, and marketing of slaves.

Manning (1990) uses a simulation model to estimate the demographic impact of the slave trades. In the absence of any slave trades and assuming the same intrinsic rate of growth as the slave simulation (five per thousand), he finds that the population of Africa rises to 100 million in 1850, rather than the 50 million actually observed. Eltis (1987) has countered that the demographic impact of the slave trade on Africa was marginal. To argue that the slave trade caused a secular decline in the population of West Africa would require either the assumption of a very small initial population or of an intrinsic rate of population growth of less than half a percent per year; neither of these is supported by the data. In addition, the age/sex ratios that drive the results in Manning (1990) were exceptionally high during the late eighteenth century and were short-lived; adjusting for this reduces the estimated impact of the slave trades.

A recent economic literature has emerged to test some of these claims empirically. Nunn (2008) shows that the countries that exported the most slaves are poorest today. Nunn and Wantchekon (2008) find that the slave trade also produced lower levels of trust among the ethnic groups that were most affected. Whatley and Gillezeau (2009) demonstrate that the supply of slaves from Africa was upward-sloping, evidence that the trade increased "the production of social death in Africa." They also find evidence to support the "guns for slaves" view of Inikori (1977), showing that gunpowder imports to Africa spurred the export of slaves.

3.4. **Colonial rule.** Early writers on the impact of colonialism on Africa focused on the "underdevelopment" of the continent – its relegation to the role of exporter of primary commodities. Rodney (1974) argues that health services were offered preferentially to areas that produced goods for export. Roads and railways, built with forced labor, "led down to the sea," and did not aid internal trade. Capital was invested by firms who had accumulated it during the slave trades. In his view, little new capital was brought in, and Africans received little in the way of wages, cash payments, and social services. Amin (1972), similarly, categorizes colonial Africa into the "Africa of the labor reserves" and the "Africa of the colonial trade economy." In both cases, no "traditional" economies were left behind by colonial rule, "only dependent peripheral societies."

Marxists have added class analysis to these theories of underdevelopment. Leys (1975) applies such a model to Kenya. Independence was necessitated by the disaffection of a rising class of educated and politically active Africans. Out of their own interests, ideologies, and desire for stability, leaders of both KANU and KADU supported a continuation of the old economic structures – "acceptance of private property and the highly regulated, monopolistic, private enterprize system established under colonialism." The colonial state, while it still had the power, arranged for the evacuation of expatriate mixed farmers and their replacement with a "new peasantry" that was integrated with the foreign-dominated urban sector. Similarly, attempts by the independent government to reduce dependence on foreign capital through Africanization and regulation ultimately failed. Brett (1973), similarly, argues that in East Africa the interests of African peasants were made subordinate to those of white settlers, who needed state support to remain economically viable. His focus is not on land allocation, but on other government policies – railway rates, customs duties, the placement of railways, and discouragement of coffee cultivation by Africans. Africans were also shut out of the industrial and entrepreneurial sectors.

More recent studies have focused on the institutional consequences of colonial rule. Three themes from this newer literature are the undermining of existing institutions, destruction of systems of environmental management, and creation of political disorder.[3] For Vansina (1990) the only concession Europeans made to the "equatorial way of life was to preserve some cultural flotsam and jetsam, and to erect a structure labeled customary law, which was utterly foreign to the spirit of the former tradition." The result was that the transition to independence occurred with no common tradition as a guide, and "the people of equatorial Africa are still bereft of a common purpose."

Environmental historians have shown that colonial rule disrupted African agricultural systems, leading to poverty and ecological degradation. Fairhead and Leach (1996) argue that a century of policy in Guinea has followed on the misguided assumption that forest "islands" were the last remains of a once dense forest destroyed by local communities who have, in fact, been creating this forest cover. Kreike (1996) studies the northern Ovambo floodplain. When the Portuguese invaded in 1914-15, inhabitants fled into northern Namibia, leaving behind their "food stores, seed stock, tools and livestock." In 1926, the "Neutral Zone" between Angola and Namibia was awarded to Angola, and the people living there were torn between undeveloped land, which offered sanctuary, and the areas they had developed but which had fallen under Portuguese control. Controversially, Kjekshus (1977) has shown that areas of Tanzania considered uninhabitable tsetse-ridden wilderness during the colonial period were densely settled areas in which cattle were kept before the multiple crises of rinderpest, smallpox, sand-fleas, famine, procuration, and colonial warfare dismantled the "man-controlled ecological system." Similar critiques have been launched of colonial and post-colonial game and forest reservation policies (Neumann, 2001; von Hellermann and Usuanlele, 2009)

Political historians contend that current disorder has colonial roots. Mamdani (1996) has argued influentially that indirect rule everywhere in Africa created a "decentralized despotism" that put rural dwellers at the mercy of chiefs and their arbitrary imposition of "customary" law. In independent Africa, this system of rule has been "deracialized but not democratized." For Young (1997), the "autocratic heritage of the colonial state" left independent African states preoccupied with their own authority and security. Constitutions guaranteed state authority, rather than protecting citizens from the state. The new "integral" state sought to pervade civil society. Other pervasive failures can be linked to the colonial period. Gardner (2009) shows that, because they lacked information, colonial officials in Zambia and Kenya deferred to local officials in granting tax exemptions; the corruption that this engendered has persisted into the colonial period, making it difficult for both countries to raise revenues through direct taxation.

[3] I am indebted to Charlotte Walker for suggesting these three themes to me.

While Mamdani (1996) rejects any substantive distinction between British and French colonies, MacLean (2002) argues that these differences created institutions that produce divergent outcomes in the present. British rule reinforced chieftaincy and so promoted an indirect relationship between the state and ethnic communities, while French rule displaced chieftaincy and created a direct relationship between individuals and the state. As a consequence, independent Ghana has attempted to build a social safety net by reinforcing informal family and community networks, while Côte d'Ivoire has tried to supplant these with bureaucratic efforts. Firmin-Sellers (2000) adds that British rule led to different class structures in the two countries, since land tenure in Ghana came to privilege lineage heads.

Empirical studies have confirmed that there are considerable differences in colonial legacies. Grier (1999) shows that colonies that were held longer have performed better today; Olsson (2009) finds the same result using democracy as an outcome. Acemoglu et al. (2009) note that earliness of independence and constraints on the executive at the end of the colonial period predict modern democracy. Bubb (2009) exploits a regression discontinuity design to show that, while schooling outcomes vary drastically across the Ghana-Côte d'Ivoire border, differing policies towards land tenure have been unable to influence institutions on the ground. Berger (2008) shows that divergent forms of colonial rule continue to reach into the present even within countries. Between 1900 and 1914, the border between Northern and Southern Nigeria was a straight line. Without ports that could levy tariffs, direct taxes were used to create bureaucratic capacity in the North. Using a regression discontinuity design, he shows that present-day communities just north of the now anachronistic border continue to show greater satisfaction with their local governments and receive higher levels of vaccination.

There is a substantial literature (e.g. Porta et al. (1997)) stressing that a legacy of common (as opposed to civil) law promotes property rights, quality of government, political freedom, and financial development today. In Africa, the colonial reliance on "customary" law has received significant attention. For Chanock (1985), rigidified interpretations of custom emerged in colonial Zambia and Malawi in response to British legal ideas and competing African ones. Given the power to define individuals' obligations, Native Courts were given significant leeway to make their conceptions of the ideal obligatory. This same analysis is at the heart of Mamdani's (1996) theory of "decentralized despotism." For Chagga chiefs in Tanzania, as elsewhere in much of colonial Africa, their powers over the customary courts were a significant part of their political authority (Moore, 1986).

Spear (2003) cautions that customary law was not imposed by colonial officials, but was rather:

> a contingent and dialogical [process] in which Europeans employed African customs as well as their own moral and legal codes to seek to establish political, social and economic domination, while Africans – old and young, male and female – appealed variously to African, colonial, Muslim and Christian codes to defend their own interests.

Berry (1992) takes a similar view. Walker (2010) applies this analysis to questions of bridwealth, divorce, and polygyny in Cameroon. While French officials sought to abolish "commerce" and "trafficking" in women, in many cases household heads and other male relatives found new ways to exploit women within the new legal framework. Lange (2004) has shown empirically that "customary" law does shape modern development. The proportion of "customary" court cases in all court cases in 1955 is a negative predictor of several measures of good governance today in a sample of 33 former British colonies.

Educational policies also differed between French and British colonies. While British rulers provided primary vocational training and literacy, their fear of educated elites dissuaded them from encouraging education above the primary level. In French colonies, while there was also a suspicion of educated Africans, curricula were centralized and schools were mandated to teach in French (Bolt and Bezemer, 2009). Differences in educational attainment have been persistent over time both across (Bolt and Bezemer, 2009) and within (Huillery, 2009) former colonies. Grier (1999), similarly, shows that the development gap between British and French former colonies can largely be explained by differences in primary and secondary school enrollment at independence. These are only a few of the possible channels through which the colonizer dummies found by Price (2003) and Bertocchi and Canova (2002) operate.

Though it is not always their intent, several recent empirical studies have inadvertently provided arguments rehabilitating colonial rule. Huillery (2008) shows that the parts of French West Africa that resisted colonialism most forcefully received fewer settlers. The European share of the population in 1925, however, is a significant positive predictor of contemporary literacy, schooling, child health, access to basic services, and housing quality. Similarly, Huillery (2009) shows that colonial investments in teachers, medical staff and public works in the 1910-1928 period continue to have positive effects on access to public services, enrollment rates, and child health in the present. A similar conclusion can be inferred from Bolt and Bezemer (2009), though their results differ from those of Cogneau (2003), who finds that educational differences between British and French colonies did not give rise to differences in GDP or life expectancy.

Moradi (2009) demonstrates, using a sample of Kenyan army recruits and civilians from 1880 to 1980, that there was a large secular increase in heights from 1920 on. "However bad colonial policies were," he concludes, "nutrition and health steadily improved from the beginning of the 20th century." Austin et al. (2009), similarly, show that heights increased over time in colonial Ghana, with this trend reversing only in the 1970s. Gould et al. (2008) find that the secular height increase from 1925 to 1960 in Ghana and Côte d'Ivoire was comparable to that in France and Britain over the years 1875 to 1975, a trend that reversed in the first twenty five years of independence.

3.5. **Underdevelopment.** "Underdevelopment"-type explanations of African poverty have already been discussed above in connection with colonial rule and with the slave trades. The continued dependence of independent African countries on primary commodity exports has received widespread notice as a drag on growth. Critical to this theory was the recognition, due to Frank (1969), that economic structures in "underdeveloped" countries were not traditional, but were created by incorporation into the world economy. For Nkrumah (1966), Colonialism gave way to neo-Colonialism, both economic and political:

> The neo-colonial State may be obliged to take the manufactured products of the imperialist power to the exclusion of competing products from elsewhere. Control over government policy in the neo-colonial State may be secured by payments towards the cost of running the State, by the provision of civil servants in positions where they can dictate policy, and by monetary control over foreign exchange through the imposition of a banking system controlled by the imperial power...The result of neo-colonialism is that foreign capital is used for the exploitation rather than for the development of the less developed parts of the world. Investment under neo-colonialism increases rather than decreases the gap between the rich and the poor countries of the world.

To Wallerstein (1974), peripheral countries were faced with three strategies for advancement – import substitution, promotion by innovation, and self reliance (as under *ujamaa* in Tanzania). The nature of the world economy, however, made each of these problematic. Peripheral countries that attempted import substitution remained reliant on the "core" for new technologies, had to cope with natural monopolies due to the scale of output, and faced political contradictions between capitalists and workers. Nations seeking innovation must compete with each other for direct foreign investment, and are left with little surplus. Self-reliant economies must cope with urban unemployment and their small national markets. Later critics, such as Bates (1984), identified other problems with import substitution and other anti-trade policies that kept unproductive and politically powerful manufacturing enterprises in business at the expense of rural producers.

The finding that natural resource exports impede growth (e.g. Sachs and Warner (1997)) does lend some support to the structuralist view. The empirical literature on trade and growth, however, has found that trade has a strong positive effect on GDP per capita. The correlation between openness to trade and GDP growth is strong; Sachs and Warner (1995) argue that it is the difference between convergence and failure to converge for poor countries. Because of possible reverse causation, the strongest evidence for a positive link between trade and growth comes from studies that have used instrumental variables. Frankel and Romer (1999) use geographic characteristics to predict trade as a share of GDP, and find that OLS estimates of the effect are not overstated. Dollar and Kraay (2003), using a dynamic panel model, suggest that trade is even a better predictor of economic expansion than institutions, though they note that this is not inconsistent with the view of Rodrik (2000), who argues that improvements in institutions spur trade growth.

The problem then becomes Africa's failure to trade. For Collier (1995), three of the most credible explanations of Africa's "marginalization" within the world economy are institutional. First, economic reform has not been sufficient. Before the structural reforms of the 1980s, parastatal industrial enterprises and overvalued exchange rates intended to subsidize imported capital kept the scale of industry small and discouraged ethnic minorities and foreign firms. While the "most egregious impediments" have since been removed, many (e.g. Van de Walle (2001)) argue that they have not been properly implemented or gone far enough. Second, risks for investors are high. Policy risk exists because policies may be dictated by aid donors and policy commitments are not credible. Third, there are only weak restraints between the state and private agents, and in interactions between private agents. Central banks lack independence. Ministries lack control of their budgets. De facto taxation is on real assets, which discourages investment. The legal and audit systems in many states have deteriorated, making it difficult to recover collateral or to obtain the information necessary to guide investment.

Interest in underdevelopment was revised during the late 1990s and early 2000s by the rise of "globalization." Two broad critiques have been raised against this latter wave of trade liberalization. First, greater openness increases exposure to external risks. Jones and Olken (2010) note that climate shocks affect the agricultural and light manufacturing exports of poor countries (a 2 to 5.7 percentage point drop in response to a 1°C increase in temperature), while heavy manufacturing and the exports of rich countries are not affected. Institutions can mediate these risks; Rodrik (1998) suggests that the positive correlation between trade openness and government size exists because government spending can reduce terms-of-trade risk. This, of course, is only possible where governments are capable – where institutions are "good".

Capital flows are particularly volatile. In Africa, this is particularly severe, as capital flight is larger than foreign direct investment (Ajayi, 2003). Azam et al. (2002) note that African dependence on the world economy exposes the continent to movements in the terms of trade, international capital flows, and world interest rates. Speculative attacks on currencies can overshoot the long-run equilibria, damaging economic and political institutions in the short run. Capital risk is mediated by institutions; Wei (2003) shows that corruption discourages (less volatile) foreign direct investment in favor of (more volatile) portfolio investment. Similarly, more corrupt countries are known to have weaker banking systems, and will be more vulnerable to speculative attacks.

The second charge leveled against globalization is that the impact of trade on institutions in general and governance in particular may be negative. Statistically, democracy appears to promote trade openness, but not the reverse (Milner and Mukherjee, 2009). Azam et al. (2002) suggest that periods of worsening trade can lead to bad policy, encouraging companies to restrict imports, devalue currencies, and practice fiscal and monetary austerity. Again, institutions matter through the policies to which they give rise. While point estimates of the impact of exports on growth have been positive, trade must be well managed; they cite the contrast of Botswana with Zambian copper and the East African commodities boom as evidence. Bevan and Fosu (2003) note that limiting the power of government through liberal trade policy may prevent states from acting irresponsibly, but also hinder them from acting responsibly. Countering this objection, Wei (2003) shows that more naturally open countries display lower levels of corruption, even conditioning on GDP per capita, ethnolinguistic fractionalization, democracy, and decentralization. One possible channel for this effect is the greater relative pay of public servants in more naturally open countries.

3.6. **Dead aid.** While Africa approached independence burdened with geographic and historical constraints on economic growth, the continent's widespread failure to develop since then is striking. A common observation (e.g. Werlin (1991)) is that per capita GDP in Ghana and South Korea were roughly the same in 1957, but an order of magnitude different thirty years later. The inability of more than $700 billion in Western aid since 1960 to improve this situation has received considerable attention in recent years. In a particularly vivid example, Ferguson (1990) has detailed the inability of CIDA agents in charge of the Thaba-Teska project in Lesotho to understand the economic and political context in which the project was inserted, or even that it had failed. Burnside and Dollar (2000) provide some evidence that aid can have a positive effect on growth, when given to countries with "good" policies, but as Easterly (2009) notes, their results are not statistically robust.

Easterly (2009) argues that the West has not learned from its mistakes in its attempts to "save" Africa. When efforts fail, even more ambitious ideas are attempted. Rather than successively testing approaches and discarding those that do not work, ideas come in cycles and old concepts become fashionable again once their previous failures have been forgotten. In Easterly's (2006) view, development "Planners" who are insulated from accountability crowd out feedback-driven "Searchers" capable of implementing "effective piecemeal actions" that would incrementally better the lot of the world's poor. "Planners" remain popular because of the West's utopianism, and its preference for "big plans for big problems." Easterly and

Pfutze (2008) show that bilateral and multilateral aid agencies lack transparency, fail to specialize in their giving, send it through ineffective channels such as food aid and tied aid, have high overhead expenses, and target too much towards corrupt, unfree regimes whose needs are not the most dire. For Moyo (2009), the critique of aid is even stronger. Not only has it has failed to develop Africa, it has actively harmed the continent. Aid, she charges, fuels corruption, thwarts accountability, spurs civil war, crowds out domestic savings, creates inflation, chokes off exports, and leads to dependency. Brutigam and Knack (2004) show empirically that higher aid levels predict lower subjective measures of governance and tax effort.

Collier (2007) is more ambivalent about aid to Africa; while he believes it can promote growth, most African governments are at the maximum of their absorptive capacity, above which additional aid will do little good. In the past, aid has not been credibly tied to performance, but well targeted aid, such as technical assistance in post-conflict situations, can do much good. Collier (1999a) cautions that the "aid dependency" view has gone too far. The effects of aid, contingent on a satisfactory policy environment, should not turn negative until the aid-to-GDP ratio is over 30% (Collier and Dollar, 2002). Aid should not, like the standard critique of welfare, impose high marginal tax rates that discourage "work"; rather, aid allows recipient governments to lower taxes faced by their own citizens. Public investment may complement private investment, so aid need not crowd this out. Rather than creating risk, aid is more reliable than governments' other sources of revenue. The key caveat appears to be the policy environment – given to countries with already good institutions, aid can be effective.

3.7. **Institutional failure.** One of the most powerful explanations of African poverty is bad institutions. Weak, undemocratic states are unable to stem corruption or to enact good policies. Private property is not well protected, stifling investment. Acemoglu et al. (2001) illustrate the quantitative importance of institutions by suggesting that if Nigeria performed as well on their expropriation risk index as Chile, it would be seven times richer, closing nearly two thirds of the income difference between those countries. Perverse incentives within bad institutions also operate at the local level. This year's *Africa Development Indicators* essay (The World Bank, 2010) has highlighted the pervasive problem of "Quiet Corruption" – the failure public servants to deliver services that have been paid for by the government (such as absentee teachers and teachers or workers who take medicines and fertilizers for themselves).

Acemoglu et al. (2002a) interpret the unusual success of Botswana as a consequence of its institutions. Pre-colonial Tswana *kgotlas* (assemblies) were unusually democratic, allowing adult males to criticize traditional authorities. Expecting Bechuanaland to be amalgamated eventually into South Africa, the British did little to undermine these institutions. Post-independence elites inherited the legitimacy of these institutions, and their interests as cattle-owners encouraged them to support secure private property and trade policies favorable to exports. Jerven (2010a) cautions, however, that the quality of the GDP data for Botswana is poor (indeed, in Jerven (2009b, 2010b) he provides good reason to be skeptical of most African GDP estimates). "Good policy" as an explanation for growth in Botswana only makes sense if it is defined as the absence of "very bad policies" – lack mismanagement or kleptocracy, failure to nationalize the mining industry, avoidance of excessive spending, and escaping currency overvaluation.

Rather than undermining the role of institutions in explaining Botswanan success, this underscores the importance of institutions in averting development traps. Many of the "traps" described by Collier (2007) have institutions at their roots. Civil war is a trap because the state is weak and the incentives for rebel leaders are perverse. Natural resource rents erode checks and balances in government, fueling corruption and distorting electoral competition. Many of his proposed solutions are also institutional – charters for natural resource revenues, democracy, and budget transparency are effectively institutions that constrain governments in order to help overcome time inconsistency problems.

Indeed, the most visible role of institutions on growth in modern Africa has been their effect on policies, particularly those that affect trade. Sachs and Warner (1997) stress the lack of openness to trade as a major obstacle to growth in Africa. There are three dominant explanations for poor policies in Africa – ethnolinguistic fractionalization, low social capital, and poor institutions. That ethnicity is mediated by institutions has been shown above. Social capital, however, is a slippery concept. Guinnane (2005) has argued that "trust," as it is conventionally measured, is meaningless. People and institutions are trusted at specific times, in specific tasks. As a concept, trust is superfulous; its useful parts are already included in our understanding of information and the ability to impose sanctions. We are left, then, with bad institutions to explain bad policy choices. Bates (1984), for example, has explained African states' destructive trade policies prior to structural adjustment in terms of the incentives they faced, given their weakness. States taxed the mass of rural producers in order to placate the urban residents and rural elites on whom they depended for survival.

A second major consequence of bad institutions in Africa is the inability of the state to restrain violence. While the incidence of wars in Sub-Saharan Africa has not been greater than in other developing regions in the 1960-2000 period, conflict is becoming more common in Africa and less common in the rest of the world (Collier and Hoeffler, 2002). Civil wars reduce growth; after a short war, growth continues to decline (Collier, 1999b). (Bates, 2008) explains the prevalence of war in Africa as a consequence of its authoritarian states and their "penchant for predation." Bertocchi and Guerzoni (2010), similarly, find that a civil liberties index and the number of revolutions are the most important determinants of state fragility in contemporary Africa. Strategies to avert war are also costly. Reno (1997a,b) argues that, in their struggle to preserve their authority and fend off rivals, states such as Angola, Sierra Leone and Liberia had to rely on foreign firms and mercenaries during the 1990s to provide the services formerly allotted to state bureaucracies. Once reliable local strongmen became rivals for power as the resources available to provide state patronage declined.

The focus on institutions in this paper is motivated in part by this explanation of African poverty. More fundamentally, each of the previous explanations (geography, ethnolinguistic fractionalization, the slave trades, colonial rule, underdevelopment and ineffective foreign aid) have been shown to be linked to institutions. Either they create bad institutions (e.g. high settler mortality produces extractive colonial institutions), or their effects are mediated by institutions (e.g. ethnic identity only matters under single party rule).

Why look at institutions that existed prior to colonial rule, or these institutions as they have only been partially transformed by the colonial and independence periods? Studies such as Bezemer et al. (2009) and Gennaioli and Rainer (2007) have shown these institutions to be directly relevant today. In addition, modern phenomena such as polygyny and overlapping rights over land, while not timeless, are institutions that were decisively influenced by the thousands of years that preceded colonial rule. Finally, the stereotype of a typical colonial officer was that of a "lone-handed DC in Africa solely responsible for the administration of an area the size of Wales or a typical English county" (Kirk-Greene, 1980). As Austin (2008) points out, this implies that "much that happened during colonial rule was neither intended nor solely determined – was not 'chosen' – by the colonial authorities." Institutions created by both colonial and post-colonial rulers have had to contend with the institutions that already existed and build on them as a base. Even where their direct effects are not apparent, pre-colonial institutions affect the present through the constraints they have placed on later institutional development.

4. Causes and consequences of African institutions

In this section I argue that the study of pre-colonial African institutions is useful both for understanding institutional failures today and for explaining the continent's current situation. I briefly review theories of why pre-colonial African land tenure, slavery, polygyny, capital markets, and states looked the way they did, and why the nature of each of these pre-colonial institutions matter today.

4.1. **Land tenure.** The most distinctive feature of land rights in Africa is the continued existence of overlapping, group-based rights over land. The study of the origin of rights in land is not new. For Maine (1861), "private property, in the shape in which we know it, was chiefly formed by the gradual disentanglement of the separate rights of individuals from the blended rights of a community." In his view (one which informed the prejudices of colonial officials), transactions in property are itinially burdened by ceremony, and "as soon as society has acquired even a slight degree of activity," property is divided into higher and lower orders according to dignity, so that inferior goods are "relieved from the fetters which antiquity has imposed on them." Gradually, this freedom spreads to the higher forms of property, including land.

The influential theory of Boserup (1965) posits population growth as the key driver of change. As population makes land scarce, extensive agricultural techniques become unsustainable. Rights over fallow land, which originally had no value, become claims worth defending. Demsetz (1967) has famously argued that the main allocative function of property rights is to internalize the beneficial and harmful effects of the use of property. Because of this, changes in rights are brought about by new externalities. His chosen example is the Indians of the Labrador Peninsula, who evolved private rights over land once the fur trade intensified the externality costs of over-hunting. Together, these arguments concerning population and trade constitute what Platteau (1996) has called the "evolutionary" theory of land rights. The purported benefits of land titling and land markets have failed to materialize in Africa; he takes this as an indictment of the theory. For these advantages to be realized, two (unsatisfied) conditions must be met. First, new technologies must exist so that investment is possible. Second, efficiency concerns must be separable from questions of equity.

Why do overlapping claims in land matter today? One answer is that insecure rights over land constrain investment. This is the central theme of the popular book by de Soto (2003). Goldstein and Udry (2008) have recently estimated that the fear of expropriation prevents individuals in Ghana from leaving land fallow if they have received it through their matrilineage. The resulting loss in land fertility costs Ghana close to 1% of its GDP per year. Land tenure also matters because land conflicts produce violence. In a recent article for the *Christian Science Monitor*, Moore (2010) has argued that:

> Beneath the genocide in Darfur is a broken land tenure system, full of fights over soil that climate change is making increasingly unproductive. Somalia's infamous pirates gain cover for plundering from political chaos in the country, whose warring clans fight not only for power but primacy on disputed lands, full of resources to fuel ongoing violence. And beneath last week's Muslim-Christian riots, which killed at least 260 people in Jos, Nigeria, are decades-old grievances about political rights and the land they are tied to.

Ominously, she warns that Burundi, South Africa, southern Sudan, Uganda and Zambia are all "combustible land disputes that could erupt in conflict."

4.2. **Slavery.** While the slave trade initially received more attention, studies such as Kopytoff and Miers (1977), Roberts and Miers (1988), and Lovejoy (2000) have established African slavery as a major theme in the continent's history. Economic theories of coerced labor argue principally that it will exist where it is cheaper or more productive than free labor. One influential view links the existence of slavery to low population densities, which (through a labor supply effect) raise the wage that would have to be paid to free labor. Nieboer (1900) was the first to notice this correlation. Domar (1970) provides an analytical narrative to explain this relationship, motivated by the experience of Russia after 1500. He argues that, without restrictions on mobility, competition between employers would drive up the laborers' wages and leave little surplus even if the landlord class had a monopoly on land ownership. Restriction of peasant mobility was the next natural step. Free land, free peasants, and non-working landowners cannot coexist in his view.

Conning (2004) has formalized this reasoning using a model in which the landlord class chooses between enslavement of a proportion of the peasantry and using them as tenants. Unsurprisingly, slavery is more likely in a society with a greater land-labor ratio. He adds to this theory by including non-traded inputs. Slavery becomes less likely where there are dis-economies of scale in production or where peasants have access to the non-traded input. In these cases, the fact that slavery takes some peasant units out of production may make tenancy preferable.Lagerlöf (2009), in a complementary work, has shown that endogenous technical progress and population growth can drive societies along a path from egalitarianism to slavery, and on to free labor.

North and Thomas (1971), alternatively, explain European serfdom as a response to low population densities and high levels of insecurity. Since a knight and castle are indivisible, serfs attach themselves to lords for protection. Small populations cannot support an output market, and so the transactions costs of cash payments are high. Payments to the lord in labor lower these costs. Fenoaltea (1975) has criticized the North and Thomas (1971) model on several grounds. Their voluntary, non-exploitive interpretation of serfdom overestimates the capacity of lords to provide protection and justice, while peasants were often willing to pay for their freedom. Their analysis of the "classic" manor, he charges, overlooks many transactions costs involved in labor dues and rules out alternative contracts such as direct barter that may have been preferable. He adds that their account of the manorial system's evolution does not fit empirical facts and relies to heavily on the rigidity of custom.

Another view suggests that slavery may be more productive than free labor in specific tasks, driving its use. Fenoaltea (1984) suggests that while "pain incentives" are effective at eliciting effort, while ordinary rewards are more suitable for encouraging carefulness. Slavery, then, will be more appropriate for cotton and corn than vines and olives, skilled work, or urban environments. Engerman and Sokoloff (1997) make a similar point, contrasting the parts of the Americas that were suitable for large plantations with those that were favorable for family farms, and arguing that the latter have tended towards greater equality in the long run. Easterly (2007) has provided empirical support for this hypothesis, showing that ratio of a nation's area that is suitable for sugarcane to the area suitable for wheat is a good predictor of modern inequality, which in turn lowers GDP, schooling attainment, and institutional quality. Interestingly, this result does not rely on the Americas, and so need not operate solely through the legacy of slavery.

There is little economic work on the long-run economic reach of African slavery; the slave trade has received more attention. A promising start has been made by Bezemer et al. (2009), who show a strong negative OLS correlation between the fraction of each country in Sub-Saharan Africa that practiced slavery prior to colonial rule and GDP today. This is robust to a number of geographic controls and to the identity of the colonizer. They speculate that slavery inhibited the development of states conducive to economic growth.

4.3. **Polygyny.** The persistence of polygyny in Africa is notable. 28 countries in Sub-Saharan Africa have polygyny rates above 10% (Tertilt, 2005). Becker (1981) uses inequality between men to explain polygyny as an endogenous outcome of the marriage market; in George Bernard Shaw's famous phrase, a woman concerned for her children would "take a thousandth share, if necessary, in a husband who was a man in a thousand, rather than have some comparatively weedy weakling all to herself." Siow (2006) shows that the conditions for a monogamous equilibrium are stronger than those suggested by Becker (1981). In particular, he shows that monogamy, rather than polygyny, will be an equilibrium when the returns to mixed status marriages are low relative to the output produced by high status males matched with high status females. Gould et al. (2008) suggest that inequality between women reduces the extent of polygyny. If women are valued for the quality of their children, and not simply their quantity, then richer men will seek to purchase better, rather than more, wives.

Grossbard (1976) uses a simple model of supply and demand for "wife-services" to explain polygyny, predicting that polygyny will be increasing in male income and education, will peak when the man is at his most productive, will be declining in female education, fertility, and will lead to more divorce. Each of these predictions holds up in a sample from Maiduguri. Grossbard-Shechtman (1986), similarly, estimates that two thirds of the demand for wives in Maiduguri is demand for children.

Lagerlöf (2010) notes that, where monogamy exists, it has often been successfully imposed as law by those elites most capable of having multiple wives. He argues that, since concentration of wives creates an incentive to rebel, elites may make themselves safer by constraining polygyny; in Europe the church may have served this purpose. Boserup (1970), rather than focusing on fertility, uses the productivity of female labor to explain polygyny.

Jacoby (1995) provides empirical support for this view, showing that households demand more wives in regions of Côte d'Ivoire where female productivity in labor is higher. Adshade and Kaiser (2008) note that shift from hunting and gathering to agriculture heightened inequality between men but, counter-intuitively, lowered the prevalence of polygyny. Their explanation is that dairy agriculture and the cultivation of crops high in phytoestrogens intensified pair-bonding between humans, making monogamy a more likely outcome.

The economic importance of polygyny has not received much attention. Tertilt (2005) has argued that the purchase of wives, whose daughters generate bride price, is a profitable investment for men and can crowd out investment in capital. Many of the economically salient effects of polygyny will be demographic. Three possible channels are fertility, child mortality, and HIV transmission. First, it is clear that while polygyny is a rational strategy for men to raise their own fertility, it will constrain population growth, since births per woman are lower in polygynous households.[4] Second, while the causes remain unclear, polygyny is strongly associated with higher child mortality (e.g. Strassmann (1997)). Finally, polygyny may increase HIV risk by facilitating transmission, but may also lower it by reducing the incentives for men to have sexual contact outside of marriage. The empirical results on this question have been mixed (e.g. Reniers and Tfaily (2009)).

4.4. **States.** 11 of the 20 most "failed states" according to the Fund for Peace's 2009 index are in Africa. This may be a legacy of the lack of well developed states in pre-colonial Africa, or due to the process of colonial state formation. The most influential recent explanation for weak African states comes from Herbst (2000). He argues that pre-colonial states in land-abundant Africa did not face external threats to their existence, and did not need bureaucracies, censuses, tax collectors, or permanent militaries. They did not stifle internal dissent, and did not make concessions to their own populations. In Herbst's (2000) account, the competitive pressures between kings that Tilly (1992) argues selected strong states for survival in Europe could not operate in Africa. Robinson (2002) has criticized this view on several grounds. First, he notes that the densest former colonies were exploited by Europeans, while today's prosperous "neo-Europes" were established in sparsely populated areas. This is the "Reversal of Fortune" thesis of Acemoglu et al. (2002b). Second, he accepts Herbst's premise that the colonial period was too short to have "changed everything," but points out that over many centuries the slave trade induced predatory institutions in Africa. Third, it

[4]A cursory review of the literature shows this to be a remarkably contentious view. This may be because many studies (e.g. Josephson (2002)) use data from nineteenth century Utah. In African data, the result is unambiguous. Using a pool of all three DHS surveys for Nigeria, I have found that polygynous wives have had on average 0.255 fewer births in the past five years, with a t-statistic of 17.01, conditional on village-year fixed effects and characteristics of the household, head, and mother. These results are presented in slides posted on my website.

is not clear that bureaucratized states are a good thing; the perpetrators of the Rwandan genocide, for example, used the state bureaucracy to systemize their killings.

Herbst (2000) builds on work by Stevenson (1968), who notes a positive correlation between population density and states across Africa. Many of the exceptions to this pattern, he argues, can be attributed to high densities along the peripheries of states, the impact of the slave trade, and changes under colonial rule. Bates (1987) also provides some support for the Herbst (2000) view, showing in a small sample of African societies that population density is positively correlated with political centralization. He, however, favors a "Ricardian" theory of centralization in African societies, whereby states form when ecological variability creates gains from specialization and trade that can only be realized when there is a state to provide order and peace.

Many of Africa's borders were set arbitrarily during the Berlin Conference of 1884-5. Alesina et al. (2006) demonstrate that "artificial" states – those with straight-line borders and particularly those for which major ethnic groups are split along multiple countries – have lower GDP per capita today. Englebert et al. (2002) find that borders that divide African ethnic groups, regardless of their pre-colonial state centralization, are more likely to lead to international disputes. The same is true of straight-line borders, though inclusion of a dummy for North Africa pushes this latter result into marginal insignificance. Theories of colonialism's effect on African states by Mamdani (1996) and Young (1997) have been mentioned above.

Pre-colonial and colonial explanations of African states are not mutually exclusive. Boone (2003) models current "political topographies" in Africa as the outcomes of institutional choices made by centralized states who take economic conditions, the rural elite's economic autonomy, and pre-colonial social hierarchy as given. Outcomes can, then, differ within countries. Where cash crops are absent, local areas are left to their own devices through "non-incorporation." With cash crops but without a rural social hierarchy, state agents act with autonomy from local influences, practicing "administrative occupation." With cash crops, social hierarchies, and a rural elite not dependent on the center, the center fears these potential rivals, and practices "usurpation" of their authority. Finally, where these cash-cropping elites are dependent on the center, they make good allies, and "powersharing" is undertaken.

States clearly matter for current development. Bockstette et al. (2002) show that a very early start in state formation predicts growth today. The relative lack of state antiquity in Africa explains part of its poverty relative to the rest of the world. Gennaioli and Rainer (2007) show that pre-colonial state centralization is positively correlated with modern GDP; they posit that rulers of more centralized pre-colonial states were better able to extract public goods from colonial authorities. Bolt and Smits (2010) add local structures to this analysis, and show that countries whose pre-colonial societies had well developed community hierarchies and were outward looking are better governed in the present.

Englebert (2000b) demonstrates that a dummy for state legitimacy – an indicator for countries that were never colonized, regained former status on independence, were not created by colonialism, were not reduced to insignificance by colonialism, or for which the post-colonial state did not do "severe violence" to pre-existing political institutions – can make the "Africa dummy" disappear in cross-country growth regressions. Bates (1984) argues that the coalition of interests on which African states must rely to maintain power traps them in a cycle of taxing rural peasants in order to fund failed industrialization projects and suppress urban food prices, stifling growth. This argument was made prior to the widespread introduction of structural adjustment in Africa, but Van de Walle (2001) shows that the same confluence of interests prevent African states from effectively adopting substantive economic reforms.

5. Conclusion

Africa is still very poor, but since 1995 there has been a dramatic reduction in both poverty and inequality across the continent. This has affected countries of all types, whether landlocked or coastal, mineral-rich or mineral poor, agriculture-favorable or unfavorable, or with high or low slave exports, and regardless of colonizer (Sala-i-Martin et al., 2010). Young (2010) has confirmed this, showing that an an index of real consumption constructed from the DHS surveys has been increasing rapidly since the early 1990s. Chen and Ravallion (2008), while finding that poverty is more pervasive than previous estimates suggest, also show a decline in African poverty rates since the mid-1990s. In a recent blog post[5] Martin Ravallion cautions that the Sala-i-Martin et al. (2010) result is sensitive to the choice of poverty line, and relies on unreliable African data – for only 18 countries is there more than one survey since 1995.

The dominant view is that this new growth has been fueled by high commodity prices, though Sala-i-Martin et al. (2010) suggest that this would predict rising inequality, rather than its dramatic reduction. *The Economist* has suggested that, in addition to the commodity boom, the "combination of more open economies in a benign external environment, together with improved and more consistent policy reforms to strengthen the business environment and official actions to reduce debt burdens" have helped attract foreign investment.[6] In 2007, only Zimbabwe experienced negative growth. While African institutions remain the worst in the world, the policy environment is improving.

This review has considered the role of institutions in explaining current African poverty. Many of the most influential explanations of the continent's failure to develop – geography,

[5]http://blogs.worldbank.org/africacan/is-african-poverty-falling

[6]"Africa's strong growth," Oct 19th 2007

ethnic diversity, the slave trades, colonial rule, underdevelopment, and failed aid, can all be shown to work largely through institutions. Distinctive features of the pre-colonial African institutions of land tenure, slavery, polygyny and states continue to affect outcomes in the present day.

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