



Missions, Education and Conversion in Colonial Africa

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Missions, Education and Conversion in Colonial Africa

Felix Meier zu Selhausen (University of Sussex)

Abstract: This chapter traces the origins and long-term development of African mass-education in colonial sub-Saharan Africa. Specifically, it addresses the unique role of Christian missions in prompting a genuine schooling revolution and explores the comparative educational expansion across colonies and between genders. While the initial expansion of missions was motivated by a *global* competition for new church members, the development of African mass-education essentially depended on *local* conditions. It highlights the importance of *African agency* in the process towards mass-education that depended on local *demand* for formal education and the *supply* of African teachers who provided the bulk of mission schooling. The chapter also assesses potential pitfalls when those realities are not considered by studies, investigating historical missionary legacies on present-day African education and social mobility.

Keywords: Christian Missionaries; Education; Africa; Gender; Colonialism; Religion; Human Capital; African Agency

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1. Introduction

Christianity has evolved from a religion largely defined by the culture and politics of Europe to one that has expanded to a major religious force worldwide. In 1900, numerical expansion of Christianity was relatively low outside Europe and the Americas (Table 1).¹ Table 1 documents the rise of Christianity in the global south, over the long 20th century, due to an unprecedented wave of global missionary efforts that resulted in the fundamental shift of the center of gravity of world Christianity to Africa. In 2018, one in four Christians worldwide were African and the 2050 projections forecast further Christian growth.²

Table 1: Global share (%) of Christians, 1900-2050

	1900	1970	2000	2018	2025	2050
Africa	2	10	19	25	28	38
Asia	4	8	14	17	18	18
Europe	71	42	29	23	21	15
Latin America	12	24	26	25	24	21
North America	11	15	11	10	9	8
Oceania	1	1	1	1	1	1

Source: Derived from Johnson et al. (2018).

Notes: Figures may not add up due to rounding. Figures for the years 2025 and 2050 are future projections.

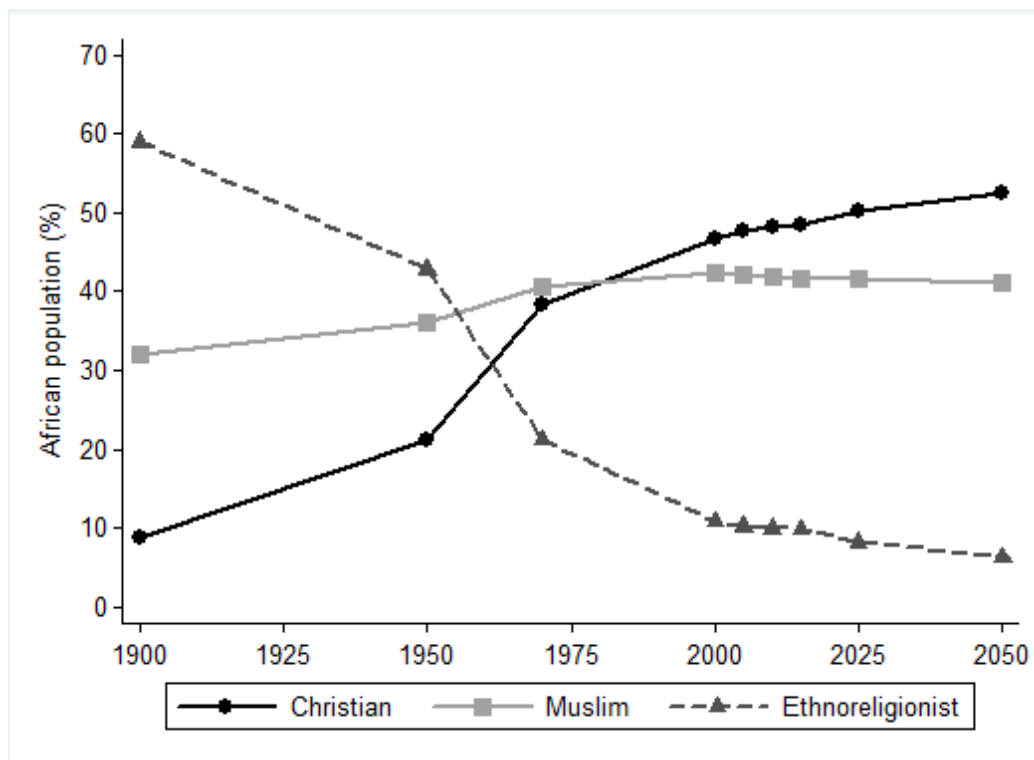
Figure 1 shows that by the end of the 19th century, most Africans were following various traditional religions and the Islam. During the 20th century, Christianity expanded rapidly in Africa at the expense of traditional religions, leading to one of the most spectacular cultural transformations in the continent's modern history (Hastings 1994; Sundkler and Steed 2000, 906). The unique historical process of African mass-conversion during the long 20th century was facilitated by vast Christian missionary efforts. Formal education was a key aspect in missionary conversion strategies and thus education became firmly connected to Christian missions. A high proportion of those who attended mission schools converted and helped spread the gospel of Jesus Christ in their local languages (Berman 1974; Frankema 2012). The school thus became, in the

¹ See the companion chapter by Felipe Valencia Caicedo in this volume on the spread of Christian missions across Latin America and Asia.

² Worldwide, by 2018 Africa is the home to most Christians: 599 million vs. 597 million in Latin America and 550 million in Europe (Johnson et al. 2018).

words of Ajayi (1965, 134) “the nursery of the infant Church”. In the absence of major investments in African education by European colonial states, mission schools provided the bulk of education for most of the colonial era (c. 1880-1960). Missions did not just provide education where the colonial state did not invest in it but the supply of mission schools primarily relieved colonial governments from financing public education (De Haas and Frankema 2018). Christian missionaries thus played a crucial role in the development of formal mass-education in most of colonial Africa, which was intrinsically linked to mass-conversion.

Figure 1: Religious shares (%) in Africa, 1900-2050



Source: Calculated from Todd M. Johnson and Brian J. Grim, eds. *World Religion Database*, Leiden/Boston: Brill, 2008.

Notes: 2025-2050 are future projections.

Towards the end of the colonial era, mission schools were replaced by state schools. As the continued expansion of Christianity shown in Figure 1 suggest, the secularization of education did not hinder Christianity’s expansion into the 21st century. In 2018, more than one in two Africans self-identified as Christian. The average years spent in education in sub-Saharan Africa increased between 1950 and 2010 from 1.2 to 5.3 (Barro and Lee 2013), suggesting that, while mission

schools were responsible for the initial rise in mass-education, most educational progress was achieved by the modern African state. Yet, early colonial missionary investments have been shown to continue to carry long-lasting impacts. A growing literature in economic history, has found a positive association between historical Western missionary activities and African educational and occupational outcomes today (e.g. Gallego and Woodberry 2010; Nunn 2014; Wantchekon et al. 2015; Alesina et al. 2019).

This chapter traces the origins and long-term development of African mass-education in colonial Africa. More specifically, it addresses the unique role of Christian missions in the development of formal education and explores the comparative educational expansion across colonies and between men and women. While the initial expansion of missions was motivated by a *global* competition for new church members, the development of African mass-education essentially depended on *local* conditions. The chapter highlights the importance of *African agency* in the process towards mass-education that depended on local *demand* for formal education and the *supply* of African teachers who provided the bulk of mission schooling. Potential mismeasurements are then assessed when those historical realities are not taken more carefully into account by studies, investigating historical missionary legacies on present-day African education and socio-economic outcomes.

2. Christian Missionary Expansion

High European mortality in tropical Africa severely restricted missionary efforts. Prior to 1850, three in four European missionaries had died before their third year of service at the West African coast (Jedwab et al. 2018).³ In fact, by the mid-19th century, European missionary societies⁴ were close to abandoning sub-Saharan Africa as viable mission field due to its hostile disease ecology and unsuccessful conversion efforts (Agbeti 1986, 3-10). The comparative absence of tropical

³ Similarly, between 1804 and 1825, 54 out of 89 Western missionaries died in Sierra Leone (Curtin 1998, 4). In Liberia, among male missionaries of the Episcopal Church 50 percent died in service 1835-1886, surviving on average 5 years (own calculations from Dunn 1992).

⁴ The most important Protestant missionary societies included: Africa Inland Mission, Baptist Missionary Society, Basel Mission, Church Mission Society, London Missionary Society, United Free Church of Scotland, Wesleyan Methodist, Methodist Episcopal, Universities' Mission to Central Africa. Main societies of the Roman Catholic Church comprised: Holy Ghost Fathers, White Fathers, Society of African Missions, Society of the Divine Word.

diseases in the southern zones of sub-Saharan Africa was the major reason why early initiatives in the south were more successful than early attempts to enter the interior of west or central Africa (Johnson 1967). Malaria did not only represent the principal barrier to European missionary expansion in tropical Africa but also for European imperial expansion. Africa remained “the white man’s grave” (Curtin 1961) until quinine became the standard therapy for malaria (and other intermittent fever) in the second half of the 19th century (Meshnick and Dobson 2001). Quinine extended European survival in the tropics significantly encouraging increasing numbers of European missionaries to volunteer to spread the Christian faith in tropical Africa post-1850 (Jedwab et al. 2018). The advent of quinine thus set the timing for both Christian missionary expansion, as well as the later scramble for Africa.

Missionary efforts often preceded European colonization. Protestant missions spread significantly earlier, since the early 19th century.⁵ Global competition for new church members intensified during the mid-late-19th century when the Catholic missions had recovered from its almost total collapse of its missionary orders (Neill 1964, 397-401; Isichei 1995, 84-86) during the crisis of the Napoleonic era (c. 1800-1815). In Ghana, missions strategically weighted costs and benefits when choosing where to establish their churches and schools. During the first half of the 19th century they targeted healthier places, with relatively lower malaria-risk, where European missionaries could survive and train local African missionaries and teachers (Jedwab et al. 2018). African demand for Christian teachings initially developed among African populations near coastal European trading communities. Missions diffused along pre-colonial trade routes, avoided African kingdoms hostile to Christian teachings, and typically settled in proximity to their point of entry at the coast. This is consistent with the observations by Johnson (1967) and Maxwell (2015) that early converts were often ex-slaves and social outcasts.

The expansion of Christianity in Africa increased with the onset of European colonial rule during the late 19th century. Colonial pacification permitted missions to safely enter previously hostile regions: the cross followed the flag.⁶ Equally, colonial investment into transport infrastructure, such as railroads and roads that lowered transport costs, attracted not only African cash crop growing farmers and exporting merchants but also missionary activity (Jedwab and

⁵ Protestant missions already had expanded during the early-mid 19th century in Sierra Leone, South Africa, Ghana, and Madagascar.

⁶ This excludes regions of Muslim-dominance.

Moradi 2016; Jedwab et al. 2018). Also, in areas with comparatively high(er) African incomes from cash-crop cultivation (i.e. cocoa, palm oil) and mining activity, there was greater demand for Western education (Frankema 2012; Jedwab et al. 2018; Juif 2019). Once the urban demand was satisfied missions diffused among rural populations. Muslim areas were mostly avoided.

Missionaries' primary intention was to convert Africans to Christianity. Mission societies viewed the provision of formal education as the most effective way of attracting new Christians, thus much of their efforts went into establishing schools (Berman 1974)⁷. Mission schools taught basic literacy, catechizing its students throughout the week. The British colonial administration, strongly interested in keeping costs low in its African colonies, adopted an open-door policy, "welcoming" missions from all denominations with the goal to "outsource" the supply of formal education to Christian missionary societies. This fostered competition between mission denominations. The British colonial state nevertheless kept some influence by subsidizing those mission schools through grants-in-aid (from African tax money) that satisfied colonial government (quality) standards, including building, equipment, number of pupils and teacher qualifications and curriculum content, laid out by the colonial administration. However, the bulk of financing and building of mission schools came from African congregations who paid fees or donated their labor and resources, sometimes in conjunction with local chiefs (Williamson 1952; Summers 2016, 322). For example, in Uganda, the Phelps-Stokes report in 1924 noted that fees and financing through collections made at local churches amounted to twice the colonial governments' grants-in-aid (Hanson 2010, 160). As a result, no clear link was observed between colonial government expenditures and enrollment rates in 11 British African colonies before 1940 (Frankema 2012). For example, although Ghana's educational budget was five times higher than Malawi's in 1938, primary-school enrollment in Malawi was five times higher than in Ghana.

In contrast, France opted for public schools financed by the colonial government. While France subsidized the operation of some Catholic mission schools, the vast majority of African students attended state-run schools. By 1900, in French West Africa there were 70 schools with an enrollment of some 2,500 pupils – 85 percent state-run (Hailey 1945, 1260-1).⁸ France thus kept a much tighter grip on the development of educational systems in its colonies than the British. The

⁷ Additional mission conversion strategies encompassed the provision of healthcare to Africans (Doyle et al. 2019; Cagé and Rueda 2019).

⁸ Colonial Madagascar and Benin presented early exceptions to the rule, where there was a significant number of mission schools, as local demand for education could not keep up with public supply (Huillery 2009).

colonial state placed more emphasis on the quality of education for a small segment of the population for the training of an administrative class in the colonial civil service (Cogneau and Moradi 2014; Dupraz 2019). Consistent with the French imperial ideology of *assimilation*, colonial governments, insisted on French as language of instruction, regulated teachers' qualifications and schools' curricula and determined enrolment capacity (White 1996). Mission schools often neglected the metropolitan language rules by teaching in the vernacular, given that their primary interest was Christian conversion in the global competition for new church members (Frankema 2012).

Unlike British colonies, Portuguese and Belgian African colonies had a more explicit bias towards the Catholic Church's involvement in education. Interested in a wide spread of elementary schooling to the masses, the colonial administration in Belgian Africa pursued a strategy of granting free entry to Catholic and Protestant missionaries who set up extensive networks of schools. But only Catholic mission schools were subsidized until the Belgian government claimed entire responsibility over educational affairs in the 1950s and increase of educational investment (Frankema 2013; Juif 2019). Provinces with intensive mining (e.g. Katanga) benefitted from significant investment by mining companies into schooling for their mining workers and their children to save expenses on recruitment and European labor (Juif 2019). Similarly, Portuguese colonial policies favored the Catholic Church explicitly, granting Catholic missionaries the educational monopoly (Gallego and Woodberry 2010). Colonial state-run schools, that taught in Portuguese, were reserved for Portuguese and "assimilados" (i.e. Africans who spoke Portuguese and had adopted Christianity and Portuguese ideals).

3. Educational Supply and Demand in Colonial Africa

The beginnings of literate education in much of 19th century Africa built upon long-established African literary cultures. The Arabic manuscripts contained in the ancient libraries of Timbuktu (Mali), the series of 16th and 17th centuries correspondence of Christian Kongo kings, with the Portuguese court, as well as the scriptures written in Ge'ez by the Ethiopian Orthodox Church represent important symbols of pre-colonial African literary heritage. However, literary knowledge was extremely localized and mainly confined to the intellectual/religious elite that did not prompt mass-education. Knowledge transfer and intellectual activity was of course possible

without literacy. Traditional African knowledge systems included practices of social learning and vocational training that transferred prescriptive knowledge (i.e. how to use techniques, tools or natural resources). As girls learnt from their mothers and other older female relatives, so boys received instruction from fathers, siblings and elders in agricultural production systems, arts, trade, warfare and politics (Anderson 1970, 1). The emergence of formal education in the context of the encounter with European missionaries and colonial states, distinguished itself from African educational systems by grouping children into class rooms for regular daily lessons with emphasis on the importance of reading and writing that required the navigation of stages, pass examinations and gain certificates (Peterson 2016).

While, the *supply* of formal education was essentially determined by the colonial state and missionary societies, African *demand* for education depended on a careful cost-benefit analysis in which African families and political leaders weighed the opportunity costs and returns to education (Cogneau and Moradi 2014). The new set of socio-economic and political institutions implemented by European colonial regimes affected African perceptions of the benefits associated with formal education and adherence to the Christian church (Frankema 2012). Mission schooling, especially by males, became seen as one method of adjusting to the new colonial realities in which literacy skills and Christian adherence offered visible social advantages (Ekechi 1971). Formal education was not only linked to new employment opportunities and social mobility (Wantchekon et al. 2015) but also promised a significant skill premium for African men in the colonial wage economy (Frankema and Van Waijenburg 2012). Especially in the major cities, where white-collar work for the colonial administration, commercial enterprises and mission schools and hospitals concentrated, the socio-economic benefits attached to mission schooling and command of the colonial masters' language and religion was substantial (Meier zu Selhausen et al. 2018).

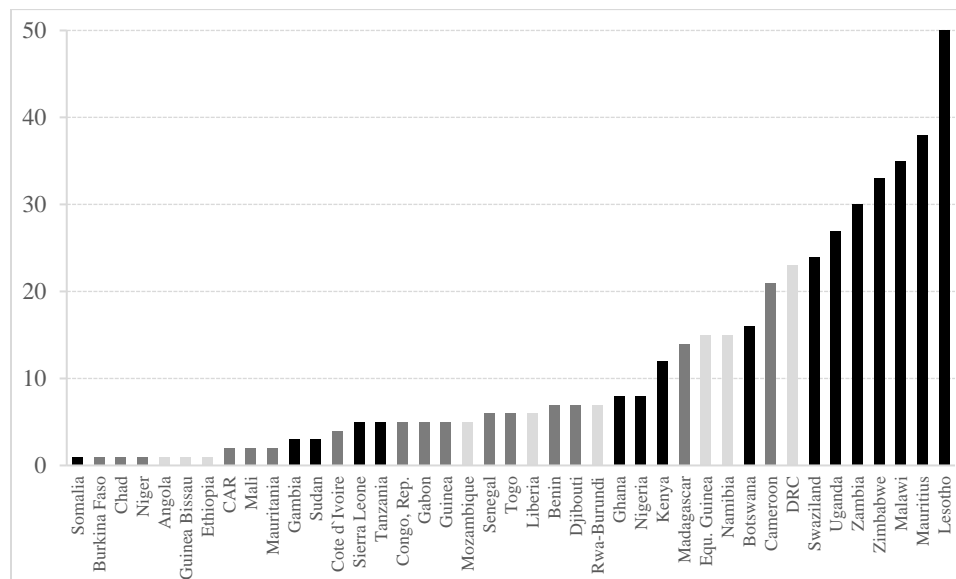
Figure 2 illustrates the primary-school enrolment rates, carefully reconstructed by Frankema (2012), of 41 African countries in 1938, subdivided into British (black), French (dark-grey) and other-ruled African territories⁹ (light grey). It shows that British colonies had comparatively higher enrollment rates than recorded in the French and other colonial territories. Seven out of the nine colonies with enrollment rates larger than 20 percent were under British mandate, while among colonies with enrollment rates below 10 percent the majority was French, Portuguese or Belgian-ruled. The average unweighted enrolment rate of 19 percent in British Africa was close to the 15

⁹ Includes independent Liberia and Ethiopia.

percent in the Belgian colonial empire¹⁰ but markedly higher than in the French (6 percent), or the Portuguese (2 percent).

Those different policies towards missionary schools in British versus French-mandated Africa also affected long-run educational and religious outcomes. Cogneau and Moradi (2014) exploit the partition of German Togoland after World War I, as natural experiment, to test the impact of British and French educational policies. When the French on their side of the new colonial border restricted missionary schools, literacy and Christian beliefs started to diverge at the border between the parts of Togoland under British and French control as early as in the 1920s. In a similar vein, Dupraz (2019) exploits the partition of German Cameroon post-World War I between France and Britain, as well as its post-independence reunification, to investigate the causal effect of French vs. British educational policies. Using border discontinuity analysis, he finds that having been colonized by the British rather than the French had a positive effect on the education of cohorts that reached school age after partition. Does this prove that the British ‘outsourcing’ of education to missionary schools was a much more effective policy to develop mass-education?

Figure 2: Gross primary-school enrolment rates (age 5-14), 1938



Source: Derived from Frankema (2012).

Notes: Enrollment rates sub-divided in British (black), French (dark grey), and other (light grey) African colonies.

¹⁰ There were stark differences within Belgian territories. While gross primary school enrolment rates in Belgian Congo (DRC) at 23 percent, much higher than the average British African enrollment, in Ruanda-Urundi enrolment was only 7 percent in 1938.

Frankema (2012) as well as Cogneau and Moradi (2014) caution that attributing differences in educational development to the identity of the colonizer alone is misleading, as it neglects the existence of local (geographical, institutional, ecological) conditions and African agency in the educational diffusion process. School enrollment, after all, was the outcome of *supply* and *demand* for education. Britain, France, Portugal and Belgium colonized African territories with different social and economic conditions, which in turn affected both local educational *supply* and *demand*. In this respect, Britain had acquired territories that had much more favorable conditions (Frankema 2012). In other words, we face “a problem of sample selection” (Dupraz 2019).

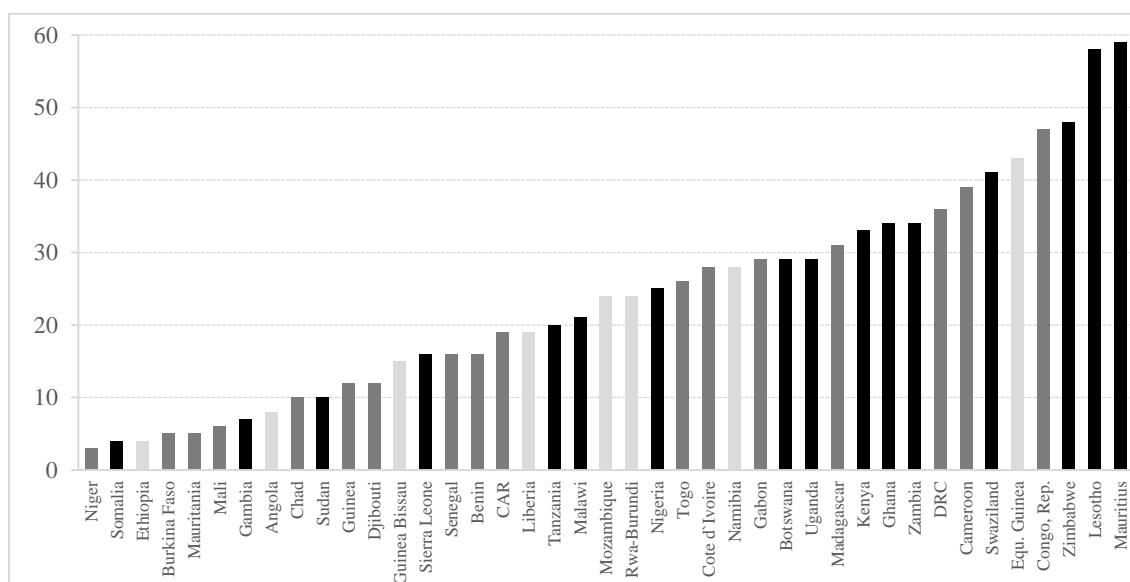
For example, regions colonized by Britain were on average richer and mostly lay outside the Muslim heartlands that rejected Christian/Western teachings (Frankema, 2012). The bottom-ten countries in terms of enrollment, both in 1938 (Figure 2) and 1960 (Figure 3), all had sizeable Muslim populations. In the 14 Islamic core countries, including Nigeria, the average primary-school enrolment rate was about 3 percent in 1938 versus 10 percent in colonies without substantial Muslim populations. The French just happened to control most Muslim core countries. Conversely, French colonies *outside* the Muslim core areas, such as Madagascar and Cameroon with extensive missionary investment (Figure 7), achieved enrollment rates comparable to British East Africa (Figure 2). Within West Africa, Britain faced similar regional constraints to mass-education as France. The 4 British West African colonies with average enrollment of less than 6 percent, did not produce higher rates than the 14 French West African colonies (5 percent) in 1938. Also, outside the overwhelmingly Christian Colony of Freetown, with the highest level of African school enrollment for most of the 19th century, mission schooling did not make any headway into the Muslim dominated hinterlands of Sierra Leone.

Muslim hostility towards Christian proselytization and education affected colonial policies, and restricted those to the southern/coastal areas, outside the Muslim heartlands. In Northern Nigeria and Northern Ghana, with sizeable Muslim populations, British governors prohibited the expansion of missionary schooling for a long time, fearing the destabilization of indirect rule through Muslim chiefs (Ayandele 1966; Cogneau and Moradi 2014). Quranic schools catered mainly for spiritual purposes of offspring from parents of higher social standing, focusing on reciting the Quran in Arabic, not with the intention of acquiring literacy skills and knowledge of the metropolitan language (Reichmuth 1993). Quranic schools thus lacked the comparative social

benefits associated with Christian or secular schools and were mostly not government-subsidized, therefore spreading significantly slower. In Uganda, for example, Muslim education did not qualify for government posts, and thus Muslims became to dominate trade instead (Summers 2016, 321). Also, Ethiopia proved no “fertile” ground for the expansion of mission schools because of the population’s widespread local adherence to the ancient Coptic Church and the Islam, which severely limited local demand for Christian/Western education (Johnson 1967).

Overall, British Africa appeared to possess more favorable conditions for the expansion of mass-education than non-British Africa. Frankema (2012) has shown that British Africa was facing comparatively less severe malaria ecologies, which allowed European missionaries to survive and increasingly train native missionaries and teachers (Jedwab et al. 2018). British Africa also on average had higher indigenous population densities and controlled those regions with higher potential for trade and agricultural commercialization where the demand and resources for formal schooling were higher. Jedwab et al. (2018) confirm that regions with higher African incomes, proxied by cash crop production, mining activities, and urbanization, witnessed relatively more missionary expansion in colonial Ghana.

Figure 3: Gross primary-school enrolment rates (age 5-14), 1960



Source: Derived from Frankema (2012).

Notes: Enrollment rates sub-divided in British (black), French (dark grey), and other (light grey) African colonies.

Post-World War II, state schools replaced mission schools in British Africa. The French colonial state increased its educational spending and increasingly recruited African teachers (Dupraz 2019), partly due to growing African demands for higher quality education and partly in preparation for decolonization (White 1996). Equally, the colonial government in Belgian Africa increased its education budget and included also Protestant mission schools from 1954 onwards (Frankema 2013; Juif 2019). Consequently, school enrollment in French colonies converged towards British African levels. Dupraz (2019) shows that the British advantage disappeared in Cameroon once the French side increased its educational investments. Figure 3 shows that in 1960, on the eve of independence, African primary school enrollment had doubled on average relative to 1938 (Figure 2). Despite considerable convergence of primary-school enrollment between British and non-British African territories the British head start did not disappear entirely: 29 percent vs. 19 percent in the French former colonies, 16 percent in Portuguese Africa. Only the two Belgian dependencies had achieved an average comparable British rate of 30 percent. The primary-school enrolment gap between Muslim vs non-Muslim core countries however widened to 10 percent versus 31 percent (Figure 3).

Secondary school enrollment, despite increased African demand, was only 1-2 percent in tropical colonies (Iliffe 2007, 230). Colonial reluctance to build a well-educated African elite meant that (mission) schools rarely taught curricula beyond basic levels. Secondary schools were thus only open to a narrow elite who then accessed occupations within the colonial bureaucracy and missionary movement (Meier zu Selhausen et al. 2018).

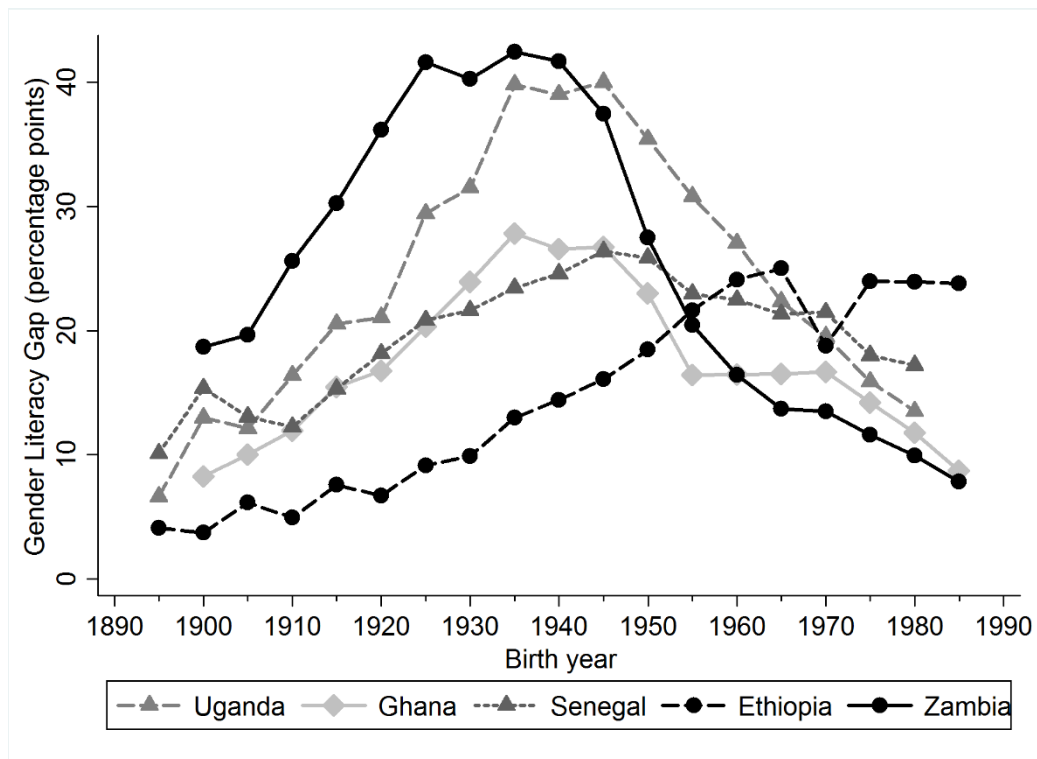
4. Mission Education and Gender Inequality

Access to education was not only unevenly distributed between and within African colonies but also became increasingly gender unequal in both levels and nature. One way to trace gender-specific literacy attainment over the course of the colonial era is to backcast men's and women's literacy by their year of birth from post-colonial censuses (De Haas and Frankema 2018; Baten et al. 2019). Figure 4 charts the literacy gap between adult men and women born over the colonial era in five selected African countries, drawn from modern population censuses. The literacy gender

gap is the difference between the share of literate males and females by birth year (i.e. 5-year aggregate).

Figure 4 shows that women's access to formal (mission) schooling in those countries, relative to men, became increasingly uneven for those born during the colonial era. The gender gap in literacy attainment increased over the colonial era, peaking in the 1940s. Thus, during the era of missionary school expansion women's education attainment fell behind men. Subsequently, the post-1950s birth cohorts show major gains toward gender equality in literacy, which coincided with the shift toward public education provided by late-colonial states in preparation for independence and especially by modern African states, taking-over from mission schools. The declining literacy gap attests that women's education benefitted from this institutional change. In Ethiopia, never colonized (for extended periods) and with ancient roots in Christian Orthodoxy male and female demand for Christian/Western education was limited (see Figure 2). Hence, the Ethiopian educational gender gap remained comparatively modest during the first half of the 20th century. Also, Baten et al. (2019) using years of education from available censuses across Africa show that during the first half of the 20th century for every year of (mission) education gained by the total adult population, the male-female gap grew by one additional year of schooling. This pattern, like the literacy gender gap shown, then breaks down towards the late colonial era with the rapid expansion and secularization of education, through the colonial government and especially through the modern African state (Simson 2018). From a historical perspective it is therefore surprising that early 20th Protestant missions have been related to positive long-term effects on African women's educational attainment in the year 2005 (Nunn 2014).

Figure 4: Gender literacy gap, 1895-1965 birth cohorts



Source: Merged population censuses from Ethiopia (1984, 1994, 2007), Ghana (1984), Senegal (1988, 2002), Uganda (1991, 2002) and Zambia (1990, 2000), accessed via IPUMS.

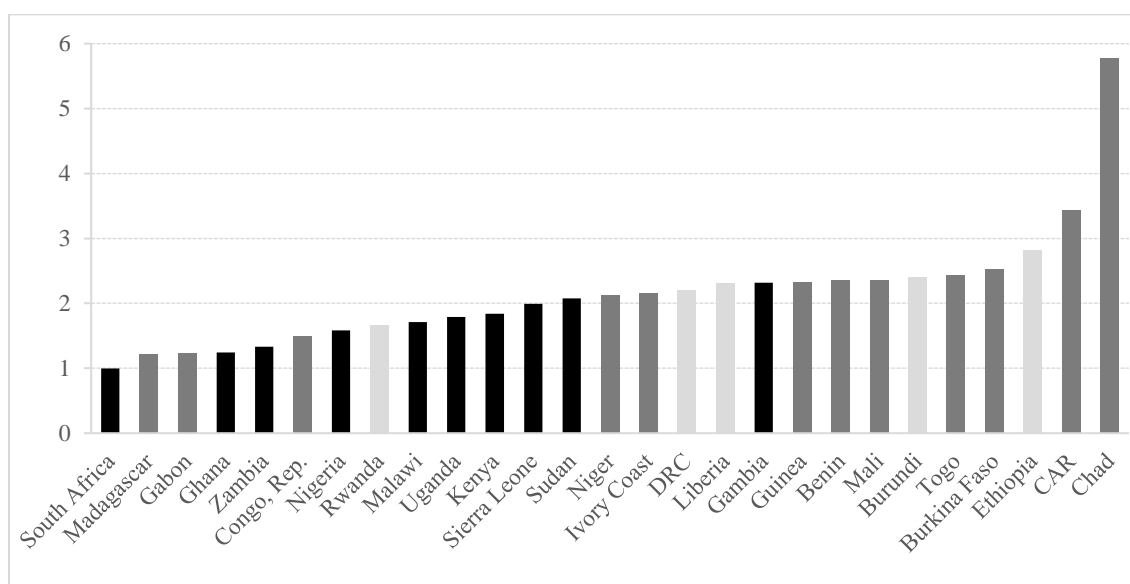
Notes: Backward extrapolation of census data by 5-year birth cohort measures individuals' literacy at the time of census-taking based on their year of birth. Although, literacy can be acquired later in life, it is assumed that people attained literacy early in life through formal education. Backcasting may overstate schooling for the early period due to survivorship bias and age exaggeration by the elder generations. The sample includes men and women of age 20-99.

Unequal access to primary education over the colonial era, along lines of gender, consequently resulted in unequal levels of human capital between men and women. Figure 5 displays the male-to-female ratio in primary school enrollment across 27 African countries during the early 1960s, on the eve of independence. It shows that South Africa was the only country where an equal number of girls and boys attended primary schools, while in three out of five countries, boys remained at least twice as often represented than girls in primary schools. Among those, 11 countries with gender ratios below two, the majority used to be British-ruled, located outside the Muslim heartlands.¹¹ Figures 2 and 3 already revealed that primary school enrollment was generally higher in those countries. According to Figure 5 enrollment was then more equally shared between the sexes in former British-ruled colonies. Also, the enrolment of girls in Islamic schools remained extremely low (Reichmuth 1993). However, linking the practice of Islam to

¹¹ Except for Northern Nigeria.

girls' particularly unequal access in primary education hides the fact that among those 16 African countries in which boys were at least twice as likely to receive primary education relative to girls (i.e. ratio of 2-6), half of them had sizeable Christian populations. An alternative explanation may rather lie in the larger Protestant mission presence in British Africa, that was restricted in French, Portuguese and Belgian colonies. Protestant missions followed the belief that personal salvation came from being able to read the Bible (i.e. *sola scriptura*), thus increasing incentives for both male and female basic education for baptism. Although Catholics also sought converts through education, compared to Protestant translations, the Catholic missions placed a lower priority on the production of vernacular scriptures (Stanley 2018, 59).¹² This is corroborated by Nunn (2014), who finds that Protestant main-mission presence during the early colonial era is especially beneficial for present-day education of women relative to men. In contrast, he documents that exposure to Catholic missions has no long-run impact on female education but a large positive impact on male education today. In a similar vein, Montgomery (2017) finds that the historical presence of Catholic missions in early colonial Tanzania negatively affects the gender gap in education today.

Figure 5: Male to female primary school enrollment ratio, c. 1963



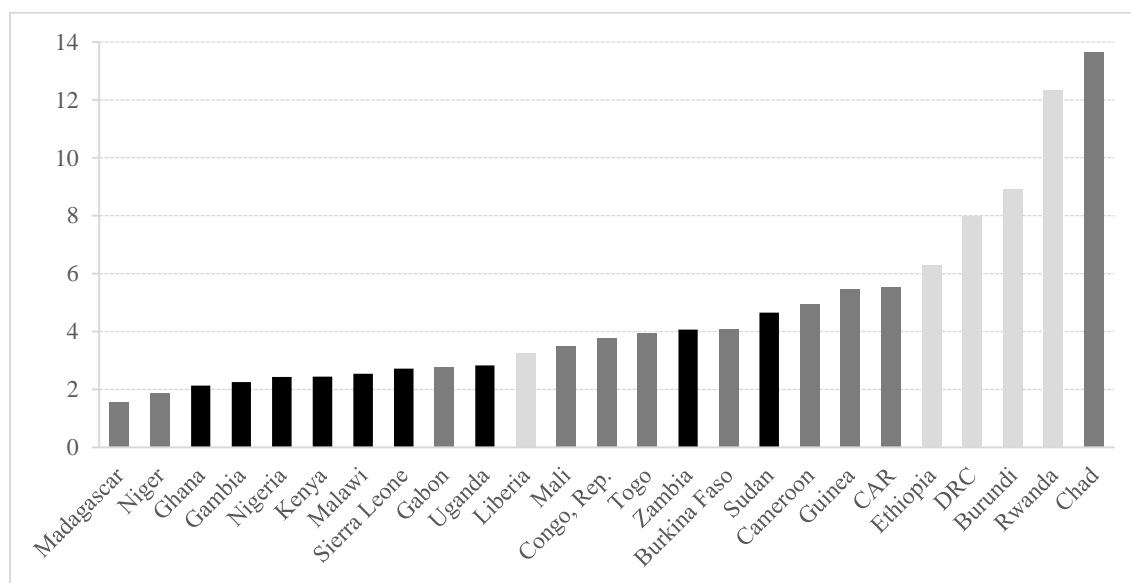
Source: UNESCO (1966), 434-435.

Notes: Enrollment rates sub-divided in former British (black), French (dark grey), and other-ruled (light grey) colonies. Estimates vary in their year of reporting between 1960-1964. 1 = equal enrollment between the sexes.

¹² By the 1850s, some parts of the Bible had been translated into 27 African languages. In 1904, full or partial biblical printed translations existed in 112 African languages (Johnson 1969).

Secondary schools catered mainly to boys. In 1942, only 13 percent of the 11,500 enrolled in the 43 colonial recognized secondary schools in British West Africa were girls (O'Connor 1964). Similarly, in 1946, the share of girls in the Belgian Congo (DRC) was 9 percent and at independence, no woman was among the hundreds of Congolese with secondary school diplomas (Juif 2019). Figure 6 shows that on the eve of independence secondary school enrollment was even more skewed towards men. Whereas males were on average twice (2.1) as often represented in primary schools (Figure 5) in 1963, an average male-to-female ratio of 4.6 in secondary education indicates that only one in five students were in fact female. While seven out of the least unequal countries were former British colonies, ratios appear particularly uneven in the three previously Belgian and French West African dependencies. Gender unequal access to tertiary education was even more pronounced with about one in 10 students enrolled being female in 1963.

Figure 6: Male to female secondary school enrollment ratio, c. 1963



Source: UNESCO (1966, 438-439).

Notes: Enrollment rates sub-divided in former British (black), French (dark grey), and other-ruled (light grey) colonies. Estimates vary in their year of reporting between 1962-1964. 1 = equal enrollment between the sexes.

Not only was access to education unequally shared between the sexes but also the nature of the school curriculum was markedly different for boys and girls (Musisi 1992; Leach 2008). Missionaries disapproved of co-educational schools. Boys, in addition to literacy, arithmetic and Bible study, learned vocational skills such as carpentry and masonry that prepared them better for

wage employment (Meier zu Selhausen and Weisdorf 2019). In contrast, girls' mission schools, besides basic literacy and numeracy emphasized domestic skills with the goal of marriage and motherhood, that inclined African gender roles to imitate late Victorian, concepts of masculinity and femininity (Musisi 1992). This often resulted into much smaller social roles than women had held in pre-colonial African societies. Africans actively expressed their frustration of the gender imbalance in the quality of schooling to the mission and the colonial government (Hanson 2010, 161-2; De Haas and Frankema 2018).¹³

Consequently, women became practically excluded from employment in the colonial wage labor market, which in turn affected parents' demand for their daughters' education in the absence of any visible social and economic advantages. Even among the upper layer of Christian-educated Africans, women were largely barred from formal participation in the urban colonial economy of British Africa (Meier zu Selhausen 2014; Meier zu Selhausen and Weisdorf 2019). As a result, women's work remained mainly domestic or informal. Meier zu Selhausen and Weisdorf (2016, 2019) have shown that on average less than one in ten women who married in Anglican churches were employed in the formal colonial economy by 1930, compared to two in three of their husbands. In the absence of opportunities for women's formal work outside the home during the early colonial era, it appears that literacy, creating some male social mobility (Wantchekon et al 2015; Meier zu Selhausen et al. 2018), rather functioned as a means of women's marriage mobility. Meier zu Selhausen and Weisdorf (2019) have found that in the capital cities of Sierra Leone, Nigeria and Uganda, literate Anglican female converts had a greater likelihood to marry Anglican elite men prior to 1920s. Ambiguously, although the domestic focus of mission schools' curriculum did its best to keep women outside the colonial wage economy, mission schools and hospitals became the first and exclusive niches for women's formal employment as teachers and nurses/midwives, until the late 1940s when the civil service became increasingly feminized (Meier zu Selhausen 2014; Meier zu Selhausen and Weisdorf 2019).

¹³ Africans also voiced their frustration with the quality of mission schools that placed religious instruction at the forefront rather than imparting formal skills that would have qualified for work in the formal colonial economy (Berman 1974).

5. The Africanization of the Mission

The term “missionaries” may evoke the image of an organization run by European clergymen serving in remote tropical Africa. Impressions nurtured by the inspiring missionary rhetoric and hyperbolic biographies of European missionaries in 19th and early 20th century Africa. These sensationalized images were often purposefully generated, motivated by mission committees need for propagandist accounts to elicit funding from their metropolitan readers (Pietz 1999; Maxwell 2015) as well as to distract from the distressing European mortality rates across 19th century equatorial Africa (Öberg and Rönnbäck 2016; Jedwab et al. 2018). Missionary expansion can also be more easily traced with reference to Western efforts because of their generally, superior documentation in mission atlases and missionary biographies (Fahs 1925; Jedwab et al. 2018). The use of geographic locations of Western residence mission stations (Nunn 2010, 2014; Cagé and Rueda 2016, 2019) or the number of Western missionaries (Woodberry 2004; Gallego and Woodberry 2010; Woodberry 2012; Acemoglu et al. 2014), as key measures of missionary influence by studies investigating missions’ long-term effects on present-day African education (see Section 6), continues to foster the widespread impression of the beneficial impact of Western missionaries.

Western missionaries were undoubtedly crucial for initial conversion efforts, strategy and set-up of formal education in early colonial Africa. However, it’s hard to imagine how a few thousand Western missionaries could have evangelized 140 million (38 percent) Africans by 1970. In reality, the principal agents of Christian and educational expansion were African missionaries and teachers. While spreading the gospel as catechists, clergymen and teachers in schools and churches, as well as medical assistants and nurses in mission hospitals, Africans also conceived the missionary movement as a vehicle of their own occupational mobility (Meier zu Selhausen et al. 2018). Western missionaries were typically responsible for exploring and mapping the territories they were sent to, performing translation work, learning the new language(s) from indigenous teachers, organizing the construction of mission churches and schools, as well as the training of African missionaries and teachers (Maxwell 2016, 268). There were various strategic motivations for this.

Firstly, Africans naturally acquired immunity to malaria (as children) and thus suffered much lower mortality (as adults) in tropical Africa compared to European missionaries (Jedwab et al.

2018). The investment into the training of African missionaries and teachers thus reduced the (sunk) costs (i.e. training and travel costs) resulting from high European mortality in the tropics. The introduction of quinine therapy then extended European survival significantly, which further accelerated the training of a native African clergy.

Secondly, given the limited financial capacity of missionary societies, the contribution of African teachers and missionaries was a requirement for the expansion of missionary education as financially it was too expensive to employ more European missionaries and teachers. European teacher salaries consumed most of mission societies' education budgets (Frankema 2012) and their training, travel costs to Africa, as well as medical and equipment needs, further added to their costs (Jedwab et al. 2018). African missionaries and teachers were comparatively more cost-efficient and mostly paid through local contributions (Frankema 2012). Their lower malaria-mortality meant that the investment into their training did not represent a sunk cost.

Thirdly, African staff were more effective in their conversion efforts through communicating the gospel in African vernacular languages (Pirouet 1974; Frankema 2012). African missionaries were intimately involved in making Christian scriptures, hymn books, and catechisms more widely accessible for the masses through their translation into African languages. Western missionaries quickly realized that African expertise was crucial to ensure that the Christian concepts were properly conveyed in local terms (Maxwell 2016, 275-6). Equipped with vernacular catechism or the Bible and hymnbooks in local language, African missionaries were arguably also less perceived by the local population as spearheads of colonialism. Therefore, the *Africanization* of the mission became a pre-requisite for rising enrolment rates (Spitz 1924, 372).

Table 2: Foreign and local missionary staff in Africa, c. 1908

	Ordained missionaries			Un-ordained mission staff			Mission stations
	Western	African	Ratio	Western	African	Ratio	Main & Out-stations
Protestant (1908)	1,566	1,552	0.99	2,987	24,933	8.35	12,246
Protestant (1908)*	917	1,151	1.26	2,964	16,654	5.62	7,048
Catholic (1911)	2,078	94	0.05	3,339	8,595	2.52	2,957
Catholic (1911)#	1,691	90	0.05	1,307	8,196	6.27	2,383

Source: Calculated from Dennis, Beach and Fahs (1911, 93-96), *World Atlas of Christian Missions*, New York: Student Volunteer Movement for Foreign Missions. Streit (1913, 101-102). *Atlas Hierarchicus*, Paderbornae: Sumptibus Typographiae Bonifacianae.

Notes: * Excluding South Africa. # Excluding Southern Africa.

Table 2 reports the number of European and African ordained and un-ordained staff of Protestant and Catholic missionary societies present in Africa at the beginning of the 20th century. It shows that while Protestant missionary societies ordained an equal number of European and African missionaries as early as 1908¹⁴, Catholic ratios were much more skewed, following a stricter racial hierarchy (Column 3). Africans made up only one out of 20 Catholic ordained recruitments in 1911. Catholic celibacy possibly enabled more young European priests to run Catholic mission stations and schools in rural areas compared to Protestant missionaries who often travelled with their wives and families (Oliver 1952, 242), which increased costs. The significantly higher Protestant Western-to-African ratio may also reflect Protestant missions' earlier 19th century expansion on the African continent. The Roman Catholic Church, backed by the Vatican, only renewed their missionary efforts post-1860s. Thus, by 1908 Protestant missionaries were at the forefront and had established four times as many missions in Africa as their Catholic contenders (column 7).

Table 2 also shows that for every Protestant Western un-ordained mission worker (e.g. teachers, evangelists, catechists) there were around eight Africans, compared to a Catholic African-to-European ratio of 2.5 (Column 6). Outside southern Africa, Catholic missions however relied more on African staff (Row 4). Although Catholic mission societies relied significantly more on European missionaries than their Protestant competitors, the lion's share of total (ordained plus un-ordained) missionary agents remained nevertheless African. Table 2 makes it clear: already during the early colonial era, the numbers of indigenous workers, including teachers, had already grown to vastly outnumber European workers.

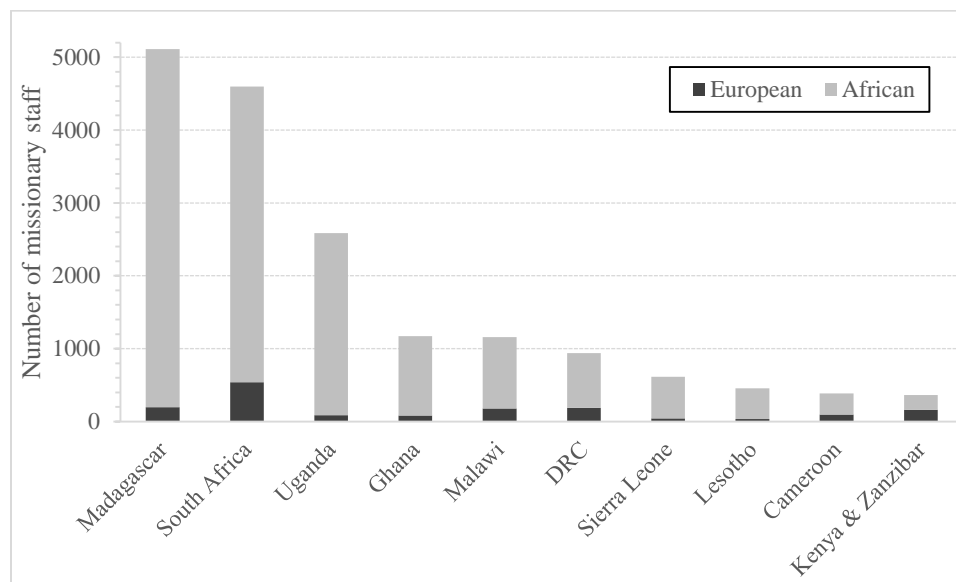
Figure 7 shows the number of African versus Western mission staff in the ten most important Protestant mission fields in Africa in 1904. Madagascar, the most active Protestant mission field at that time, was one of the exceptions in which the French permitted missionary infiltration (Isichei 1995, 150-1; Wietzke 2015).¹⁵ It becomes clear that the great majority of mission staff were African. In Uganda for instance, 2,500 African teachers and evangelists ran 170 Protestant mission schools and 162 mission stations as early as 1904, whereas European missionaries and teachers constituted barely 3 percent of the total mission workforce (Meier zu Selhausen et al.

¹⁴ Outside South Africa (Row 2), with a larger European presence, Protestant African ordained staff even outnumbered European.

¹⁵ Also, Cameroon and Benin received missions.

2018).¹⁶ Furthermore, in the Belgian Congo, with allegedly the highest numbers of European missionaries in tropical Africa,¹⁷ Frankema (2013) has shown that between 1908 and 1957 the number of Western missionaries increased by a factor of 14, while primary school enrollment simultaneously rose by a factor of 37. Such a remarkable increase was only possible due to the rapidly growing involvement of Congolese missionaries and teachers.

Figure 7: European and African Protestant missionary staff, 1904



Source: Calculated from Dwight (1905). Catholic missions have reported missionary staff per regions, not on the country level (Krose 1908).

Africa's Christianization and development of mass-education has thus commonly been narrated from a Eurocentric perspective that ascribes undue agency to Western missionary efforts, overshadowing the vital contribution of native Africans in pushing the Christian and educational frontier (Maxwell 2016, 263). The widespread view that mission Christianity and formal education in colonial Africa was diffused from an (imperial) European center into a passive Africa, appears to be grossly misleading. The presence of foreign missionaries was never a sufficient condition for mass-conversion, nor-education (Hastings 1994, 463). Instead, "Africans had to embrace the missionary zeal and make it theirs." (Frankema 2012, 352).

¹⁶ This ratio remained relatively stable. Frankema (2012) counted that in 1938 of the 8,456 primary school teachers in Uganda, only 3 percent (285) were Europeans.

¹⁷ Frankema (2013) counts for the Belgian Congo 500 foreign missionaries in 1908, while by 1938 and 1950 the number of foreign missionaries had rapidly grown to 3,732 and 5,336 respectively.

6. Historical Missionary Legacies

Do historical missionary activities and associated human capital investments continue to affect African development outcomes one century later? A recent, yet striking surge of studies in economics and economic history has set out to investigate the long-term effects of early 20th century European missionary activities on present-day African development. Since 2010, there are close to 50 studies that link the location of Western residence mission stations in Africa, reported in mission atlases and maps in one particular year, to contemporary African development outcomes.¹⁸ Education is the most common and most plausible outcome studied. Other studies link a density measure based on the number of Western missionaries per area or population to present-day Africa development.

This literature finds strong path-dependency. Historical exposure to European main mission stations and European missionaries one century ago has been positively associated with long-term educational outcomes by several studies (e.g. Acemoglu et al. 2014; Nunn 2014; Cagé and Rueda 2016; Baten and Cappelli 2017; Alesina et al. 2019).¹⁹ Exposure to religious competition between Protestant and Catholic missionaries generated particularly positive long-term effects on African human capital (Gallego and Woodberry 2010; Larreguy and Schmidt-Padilla 2017). However, did early mission education indeed pave the way for contemporary generations to attain higher years of schooling, social mobility, and incomes, or are there unobservables that could partly explain those long-term correlations?

The partial availability of locations of only European-run main missions from maps and missionary atlases can create a pitfall for researchers in the absence of detailed source critique. Firstly, what do we learn from purely Western missionary long-term effects, representing the minority of total missionaries in Africa (see Section 5)? Jedwab et al. (2018) have uncovered that official mission atlases and maps, commonly used by most persistence studies, essentially omit the vast majority (ca. 90 percent) of total missions. Fahs (1925) already criticized that mission atlases and maps only report missions of European residency but ignore the lions' share of missions

¹⁸ See Jedwab et al. (2018) for a meta-analysis of this extensive literature.

¹⁹ One exception represents Wietzke (2015) who finds no statistically significant long-term effect of early-colonial missions in Madagascar on contemporary education and economic development outcomes.

and schools run by African missionaries and teachers. The data contained in mission atlases thus reflect the implicit data priorities of European missionary societies.

Secondly, this measurement bias is further accentuated by the fact that European (and main) mission locations were the earliest missions that opened in the most developed and connected areas (Jedwab et al. 2018). Thus, missionaries did not assign themselves randomly across the continent but systematically chose conducive fields. Based on ecclesiastical censuses contained in the British Blue Books, Jedwab et al. (2018) carefully reconstruct *all* missions (i.e. main and out-stations, with and without school) in Ghana for the period 1751-1932. They show that for the various mission denominations in Ghana costs and benefits mattered for choosing where to establish their churches and schools. Locational determinants were not constant over time but *dynamic*. They interacted with local conditions (i.e. geography, institutions), African incomes, global medical innovations (e.g. quinine), investments into transport infrastructure (railroad, roads) and the timing of colonial conquest. Economically more developed localities (e.g. mining towns and cash crop production areas) with potentially greater demand for mission schooling subsequently adopted Christianity at an earlier date. For both Ghana and Africa, Jedwab et al. (2018) demonstrate that the use of relevant and properly timed historical controls is crucial to reduce endogeneity bias from (main) mission locational choices.²⁰ They also show that missionary long-term effects on human capital, culture and economic development outcomes become considerably weaker when controlling for factors that explain mission locational choices over time. In a similar vein, Fourie and Swanepoel (2015) show that indigenous residents of districts with Christian missions in 1849 have on average higher educational attainment about 150 years later. But, educational persistence disappears once they account for early selection into mission locations. This suggests that location-specific omitted variables may affect both the choice of missionary placement and long-term effects.

What is clear is that paying attention to the *dynamic* determinants and *African agency* in the expansion of Christian missions (i.e. the inclusion of both main and out-stations) is critical. This will minimize the risk of grossly overestimating missions' long-term effects, which otherwise may lead to overly optimistic conclusions of the legacy of missions on current African education. More

²⁰ For instance, despite overwhelming evidence of Muslim resistance against Christian schooling efforts (Frankema 2012), most mission legacy studies entirely neglect the role of Islam in their choice of control variables. Other studies control for railroads networks, although they had not even been built by the time of nineteenth century European mission settlement.

work is also required not only to document potential legacies but to better understand the actual benefits of mission schooling *during* the colonial era as well as the *mechanisms* through which missionary activity then persisted over time.

Early mission schooling did not only influence human capital formation but also affected long-term African inter-generational social mobility and health outcomes. Wantchekon et al. (2015), based on retrospective interviews from the descendants of those whose (grand)parents attended the first regional schools in colonial Benin, investigates the long-term effects of education on the social mobility and living standards across generations and compares those to near-by control groups where no schools had yet been set-up. They document significant higher levels of political activism and social mobility for the first generation of students of mission schools, as well as their descendants. Also, Alesina et al. (2019) show that the main missions in colonial Africa correlate strongly with contemporary intergenerational mobility in educational attainment. For colonial Uganda, Meier zu Selhausen et al. (2018) document that contrary to the widespread belief that indirect rule perpetuated the power of African political elites (Mamdani 1996), a remarkably fluid, colonial labor economy undermined chiefs' previous social advantages. Sons of chiefs gradually lost their previous high social-status monopoly to an upwardly mobile, commercially orientated, and mission-educated class of Protestant Ugandans (e.g. clerks, interpreters, teachers). On that path, the colonial administration as well as mission schools and churches functioned as key steps on the ladder to social mobility.

Missionary educational investments in colonial Africa have also been shown to persistently affect post-independence political elite-formation. Ricart-Huguet (2019) shows that the uneven supply of primary education across colonial African districts explains why some districts are more represented among modern African governments than others. Post-independence political elites were more likely to forge later ministerial careers through public education in French colonies compared to mission education in British colonies. Again, through retrospective interviews Wantchekon (2016) follows the first generation of students and their unschooled counterparts, as well as their descendants for two generations, after the establishment of colonial and missionary schools in Benin. He finds evidence of upward mobility across generations on education. However, the evidence suggests that while the second generation moved up, the third generation moved down from their parents' income levels, possibly highlighting decreasing returns to education during the post-colonial era. This chimes with the observation made by Pritchett (2001) who did not find any

effect of post-independence major expansion of education on GDP per capita, which largely stagnated or declined in Africa between 1970s and 1990s, tempting him to wonder, “where has all the education gone?”.

For French West Africa, Huillery (2009) examines the long-term impact of colonial public investments in schools and health clinics. Due to the limited number of Christian missions in French West Africa, she studies the role of investments into education and health by the colonial state during the early colonial era (1910-1928). She uncovers a sizable legacy of colonial human capital investments on long-term African schooling and health outcomes. The addition of one more teacher (doctor) per 100,000 inhabitants during the colonial era translates to one additional percentage point of school enrollment and dropping children’s stunting to about 0.5 points in the 1990s. The evidence on the benefits of education for health outcomes is less clear. Using 18,000 patient admissions from one of the earliest mission hospitals in East Africa, Doyle et al. (2019) find that Christian conversion was associated with superior health outcomes and lower incidence of skin and sexually-transmitted disease diagnoses, but numeracy per se, one proxy for education, did not predict better health outcomes. In a similar vein, Cagé and Rueda (2019) uncover that despite an overall positive impact of colonial missionary exposure on HIV infections in Africa, proximity to historical missionary health facilities decreases the likelihood of HIV due to allegedly safer sexual behavior.

7. Conclusion

This chapter has offered a comparative analysis of the evolution and nature of mass-education in colonial Africa. It has emphasized the importance of different *local* social and economic conditions - not colonial policies toward schooling per se - that deeply affected both supply and (gendered) African demand for formal education. The chapter has highlighted the unique role of Christian missions in the development of African systems of mass-education. For missions to expand beyond their limited financial and personnel capacity the *Africanization* of the mission and local African contributions (i.e. school fees and taxes) were key. Recent studies that assess missionary’s impacts on African long-term development that place their main focus on measures of foreign missions and personnel has overlooked those historical realities. Although Western missionary efforts in

Africa were driven by global competition for new church members, their success clearly depended on *local conditions* and *agency*.

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