

Linguistic Revolutions: Comparing the Impact of French Colonialism in Haiti, Senegal, and Gabon

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ABSTRACT

France extensively colonized countries in Africa, the Caribbean, the Americas, and the Indian subcontinent. However, the impact of French colonization on language was significantly different across these countries. French remains highly prevalent in Gabon, moderately prevalent in Senegal, and far less prevalent in Haiti. This contrast raises a central question: why has the same colonial language remained so dominant in some former French colonies while fading significantly in others?

This paper argues that the extent to which French remains after colonization can be better understood through the interaction of two conditions: *need* and *means*. *Need* refers to the communicative, institutional, and economic roles French continues to serve, while *means* refers to whether the broader population has the opportunity to acquire it through access to education and exposure to French within that education. The paper first examines the historical and linguistic development of Haiti, Senegal, and Gabon to understand how French came to play such different roles in each country. It then places these three cases in conversation with existing research on language, education, and state-building and analyzes how different combinations of *need* and *means* help explain their linguistic outcomes. Finally, the framework is considered across a broader group of former French colonies to examine whether similar patterns appear beyond these three cases.

The comparison suggests that neither the duration of colonization, linguistic diversity, institutional status, economic connections, nor access to French education alone fully explains the prevalence of French today. Taken together, the findings provide preliminary support for the argument that French prevalence is better understood by considering the interaction between the roles the language continues to serve, or *need*, and the opportunities populations have to acquire it, or *means*.

INTRODUCTION

A primary purpose of colonization is to expand the colonizer's economic and strategic strength by exploiting the colonized country's natural resources and controlling trade routes, military outposts, and other geopolitical interests. Colonization can also extend a nation's cultural influence, including its language, education, religion, and other social institutions (Kohn & Reddy, 2023).

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French colonialism transformed the languages of countries across Africa, the Caribbean, the Americas, Asia, and Oceania. However, the impact of colonization on language was far from uniform. French remains an official language in Haiti, Senegal, and Gabon, yet the percentage of the population that actually speaks French is drastically different. In Haiti, approximately 5–10% of the population speaks French. In Senegal, that number is around 25%, while in Gabon it is close to 80% (Organisation internationale de la Francophonie, 2026; Hebblethwaite, 2021). Why did the same colonial language remain so dominant in one country, moderately prevalent in another, and limited to a small minority in the third?

France colonized nearly 80 countries across the globe (Shillington, 2005), beginning in the 1600s and continuing until the 1960s (The Latin Library, n.d.). In the earlier part of this period, France was actively involved in the slave trade and utilized enslaved populations to work on plantations such as Haiti's sugar and coffee plantations. Later, there was a greater movement toward French nationalism and "assimilation," and the French government invested more heavily in schools and required education to be conducted in French (Gardinier, 1980). In some countries, including Senegal and Gabon, French involvement in government and education also continued after independence. Yet these similarities in French colonial policy did not produce the same linguistic outcome.

The central claim of this paper is that *need* and *means*, considered together, help explain why the prevalence of French varies so sharply after colonization. *Need* is not treated as a single condition, but as having three dimensions: communicative need, or the need for French to serve as a shared language across groups; institutional need, or the role French plays within government and national institutions; and economic need, or the extent to which connections with France create an economic reason to use the language. *Means* concerns whether the broader population has a realistic opportunity to acquire French and has two dimensions: access to sustained education and the extent to which that education exposes students to French as a language of instruction. Several of these dimensions are measured numerically, while others are coded using defined criteria, allowing the framework to be examined both qualitatively and quantitatively. The hypothesis is that French is more likely to spread widely when these different forms of *need* are reinforced by sufficient *means* for the population to acquire the language.

Haiti, Senegal, and Gabon provide three contrasting configurations of these conditions. Although French retains an institutional role in all three countries, they differ substantially in whether another language already serves as a common means of communication, in their continuing economic connections with France, and in the extent to which their populations have access to education and sustained exposure to French within it. Examining the histories of these three countries helps show how these differences developed before they are compared more systematically later in the paper.

Existing research provides several explanations for how languages develop and persist in postcolonial societies. Some scholars focus on the different functions languages serve within multilingual countries, while others examine linguistic diversity, education, state policy, and access to language learning. These explanations help account for important parts of the linguistic histories of Haiti, Senegal, and Gabon, but they do not fully explain why French spread so differently across the three countries. This paper builds on

these existing explanations by examining how *need* and *means* work together in two ways. The first compares the historical and linguistic development of the three countries and places those differences in conversation with existing scholarship, while the second operationalizes the components of *need* and *means* through measurable indicators and compares them with the prevalence of French. The framework is then considered across a broader group of former French colonies to examine whether similar patterns appear beyond the three cases used to develop it.

HAITI: A 400-YEAR JOURNEY OF CONQUESTS AND REVOLTS

Haiti provides the first case for examining how the conditions surrounding French use and acquisition developed over time.

Haitian Creole is the dominant language in Haiti today spoken by about 90-95% of the population, most of whom are mono-lingual (Valdman, 2015). Only about 5-10% speak French (Hebblethwaite, 2021). However, Haitian Creole only came into dominance in the late 17th century. Language in Haiti has transformed and evolved, sometimes slowly, sometimes more dramatically, based on colonization and other political upheavals such as the revolution of 1791 (The Editors of Encyclopaedia Britannica, 2025). Haiti's history helps explain how Creole became the shared language of the broader population while French remained concentrated in government, education, and elite life.

Haiti was first discovered by Christopher Columbus in 1492 and at that time Haiti was inhabited by the Arawaks and Taino (Coupeau, 2007). Spain immediately captured Haiti among other Caribbean islands such as The Dominican Republic, and renamed the island *La Isla Española* ("the Spanish Island"), and later *Hispaniola* (The Editors of Encyclopaedia Britannica, 2024). History has shown that colonizers are most often rapacious and look out for the greater good of the empire - or the Spanish Crown in this case - and this early colonization was no exception. The Taino indigenous people were decimated, not only in Hispaniola, but across the Caribbean (Thornton, 1990).

About 150 years after the Spaniards colonized Haiti, the French started to arrive on the island, initially as pirates on the northern end of the island and later building a settlement on the west of the island, which they named Saint-Domingue, and which Spain ceded to them. Saint-Domingue was first settled in 1697 and was known as the *Pearl of the Antilles* because of its immense natural resources including precious stones, timber, and fertile land for planting sugar, coffee, and other crops (Coupeau, 2007). By 1789, Saint-Domingue was the largest sugar and coffee producer in the world, and the colony of Saint-Domingue became France's most prosperous possession. Over 8000 plantations were tended to by slaves that the French brought over from Africa (Herrmann, 2005).

Saint-Domingue's population grew rapidly from 8000 inhabitants in 1687 to an astonishing 570,000 inhabitants in 1791 when the revolution began. There were 40,000 whites, 30,000 free people of color (called the *Affranchis*), and 500,000 slaves (Sutherland, 2007). With this imbalance in numbers and the

poor treatment of slaves, it is not hard to imagine the slave revolt in August 1791, the only successful revolution in the world led by slaves (Klooster, 2023).

Toussaint Louverture rose as the revolution's leader, organizing the slaves into an army capable of confronting the French forces. In 1794, unable to compete against the Spanish, the British, and the emancipated slaves, the French freed the slaves of Saint-Domingue (Fagg, 2024). Between 1794 and 1802, Louverture proved himself both a successful military strategist and politician, helping steer the colony toward independence (Ott, 1987). When Napoleon took control of France in 1799, he sought to rebuild France's empire in North America and attempted to reintroduce slavery in Saint-Domingue. After Louverture was captured by the French, Dessalines, a Haitian general, defeated the French forces with the help of yellow fever, which killed four-fifths of LeClerc's soldiers (Girard, 2019). Dessalines then renamed the island "Haiti" and proclaimed himself "governor-general for life" marking the end of the revolution (Dessalines, 1804).

Following the revolution, Haiti adopted its first draft of the Haitian Constitution in 1801 with the goal of safeguarding Haiti's borders from foreign invasion (Haiti and the Atlantic World, 2022). Over the next 200 years, though Haiti had periods of stability, the country went through numerous leadership transitions, including coups and dictatorial leadership such as Francois Duvalier who proclaimed to be a president-for-life. Struggles for power between the blacks and mulattoes and between the elite and the middle-class continued. Without a stable government, Haiti has continued to have unrest and upheavals and today Haiti ranks among the world's poorest countries. Living standards have declined because of the decline of natural resources and decline of agriculture, with huge inequalities in wealth distribution between the countryside and Port-au-Prince, the capital (Coupeau, 2007).

THE JOURNEY OF LANGUAGE IN HAITI: FROM ARAWAKAN TO HAITIAN CREOLE

Language in Haiti followed a tumultuous journey, just like the country did. French remains an official language and continues to hold an important role in government and formal institutions, but it is not the lingua franca of Haiti and is spoken by only a minority of the population (Hebblethwaite, 2012). Today, Haitian Creole is the dominant language, spoken by 90-95% of Haitians, even though it was only recognized as an official language as recently as 1987 (Library of Congress Research Guides, 2024).

Before Haiti was invaded by Spain, the primary languages in Haiti were the language of the indigenous Arawak and Taino people. Spanish was then introduced in 1492 when Spain colonized Haiti and over the next 20-30 years the Arawakan and Taino languages declined and were replaced by European languages, primarily Spanish, but also French and English (Coupeau, 2007). Today, many of the Arawakan languages are extinct or endangered, but some Arawakan dialects are still spoken in a few areas of the world, mainly in lowland Amazonia, covering French Guiana, Suriname, Guiana, Venezuela, Colombia, Peru, Brazil, and Bolivia (Aikhenvald, 2006).

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Linguistically, the next major change to Haiti came in 1697 when the Spanish ceded the western part of Hispaniola to France. France renamed that area Saint-Domingue and brought with them slaves from all over Africa and continued to bring slaves for nearly 100 years, until the slave population was almost 10 times larger than the French population. Thus, there was an influx of African languages into Saint-Domingue, such as from Niger, Congo, Senegal, and other parts of West Africa (Lefebvre, 1999). The enslaved population was not schooled and received little formal instruction in French, leaving most of the population with little opportunity to acquire the language. As people from different linguistic backgrounds needed a shared means of communication, Haitian Creole developed organically (Beaverson, 2017). About 80% of the vocabulary of Haitian Creole is from French, and the remaining 20% from the Bantu languages, Igbo, and other West African languages. There are also numerous words from Taino and Spanish (Seguin, 2020). Many cognates in Creole and French have different meanings and Creole grammar is distinct from French grammar, and therefore a French speaker is unable to speak or understand Creole and vice versa (Julien, 2021).

As Haitian Creole spread, it increasingly became the common language of the population. Haitian Creole unified enslaved Africans who had arrived in Saint-Domingue speaking different languages and dialects and whose population grew to over half a million people by 1791, the year the revolution began (Lefebvre, 1999). A shared language likely made communication and coordination across this diverse population easier, although language was only one factor among the much larger social, economic, and political forces that drove the revolution.

After independence, Haitian Creole continued to serve as the language of the broader population and increasingly became associated with Haitian identity and independence from French colonial rule (Admin, 2025). French, in contrast, remained concentrated among the elite and in government and education. Over time, Haitian Creole became firmly established as the language of everyday communication across the country, while French remained much more limited in its reach.

By independence, Haitian Creole had become firmly established as the shared language of everyday communication, reducing the communicative role that French might otherwise have filled. French retained institutional importance in government and education, but access to French-language schooling remained limited and the language stayed concentrated among a much smaller portion of the population. These historical conditions help explain why French never spread as broadly through Haitian society and remains spoken by only about 5–10% of the population today.

SENEGAL: FROM PROSPERITY TO UPHEAVAL

Senegal provides a second case for examining how the conditions surrounding French use and acquisition developed over time.

Senegal's pre-colonial era is marked by migrations and the rise of diverse cultures and kingdoms, such as the Wolof, Fulani, and Tukolor peoples. These groups were significantly influenced by the powerful Ghana, Mali, and Songhai empires, which facilitated the development of complex social structures and the establishment of significant kingdoms in the region (Norris, 1964). Economically, Senegal was vibrant and diverse. The economy included agriculture, pastoralism, fishing, mining, and crafts, which were integral to daily survival and prosperity. Notably, Senegal was part of extensive regional and trans-Saharan trade networks. Trade in gold, salt, ivory, and enslaved individuals not only connected it to markets in North Africa, the Mediterranean, and across the Atlantic but also facilitated the further spread of Islam and the growth of urban centers, transforming Senegal into a bustling hub of cultural exchange and economic activity (Maiga, 1995).

It is against this backdrop of pre-colonial success and peace that Senegal was colonized by the French in 1659 and, later in 1677, the island of Goree was taken over from the Dutch. The island of Goree, the first European settlement in Africa, was significant because of its importance as a shipping port (Røge, 2023). Colonization by France had significant and lasting disruptions and transformations, socially, culturally, and economically. Slave trade intensified as other French colonies, such as Haiti, required a large number of laborers for plantations that were becoming increasingly lucrative for the French. Slave trade continued until 1848 and at that time the French extended the rights of full French citizenship to the Senegalese population. However, deep-rooted social hierarchy between the French and Africans prevented Senegalese from exercising these rights (Nigro, 2018). The Africans in Senegal were given the right to vote in 1916 and that gave them the right to have Senegalese representation in the French National Assembly. Another 50 years of struggle by Senegalese political leaders in the National Assembly finally brought Senegal its independence in 1960 (Toure, 2009).

Today, Senegal is one of the relatively stable countries in West Africa with a population of about 19 million. Wolofs make up 40% of the population and the remaining consist of the Pulaar, Sereer, Mandinka, and other ethnic groups, including about 5% of the population who are descendants of Europeans. A large population is lower middle-income and the main economies include mining, construction, agriculture, fishing, and tourism (Central Intelligence Agency, n.d.-b).

THE JOURNEY OF LANGUAGE IN SENEGAL: FRENCH IN FAVOR OF ETHNIC LANGUAGES

In Senegal, French is the only official language and is spoken by about 25% of the population (Organisation internationale de la Francophonie, 2026). Wolof is spoken by 80% of the population and there are over 20 other languages spoken including Pular (25%) and Serer (11%). Six languages, in addition to French, are recognized nationally: Wolof, Serer, Pular, Mandinka, Soninke and Jola-Fony (Translators Without Borders, 2021). This means that these languages are promoted by the government and can be taught in schools and used in important publications (Clear Global, n.d.). Despite Senegal's linguistic diversity, the widespread use of Wolof meant that French was not required to serve as the

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primary language of communication between different groups. Wolof could already perform much of that role. Though European languages were introduced in 1440 with the arrival of the Portuguese, ethnic tribes largely continued to speak their own languages. The superiority of one language over another started to take shape with the arrival of the French in 1638. Over the next 200 years, the French had eliminated all other European habitation and given French citizenship to the peoples of Gorée, Saint-Louis, Dakar, and Rufisque (Mc Laughlin, 2006).

“Assimilation” of the people of Senegal was a core goal of colonization. This involved eliminating or pushing to the background the local ethnic identity of the Senegalese, and replacing that with French ways of functioning culturally, socially, linguistically, politically, and otherwise (Alleyne, 2024). France introduced an education system built around the French language and implicitly and explicitly proclaimed the dominance, importance, and superiority of the French language over Wolof and other ethnic languages (Naida, 2016). After Senegal gained its independence in 1960, the French did not leave Senegal immediately. They continued to play a role in government and education and French has continued to be Senegal’s only official language to this day. The education system therefore gave a much larger portion of the population sustained exposure to French than occurred in Haiti, while its continued role in government reinforced its institutional importance. French has also remained valuable for social and career mobility, even though Wolof is the dominant spoken language (Davies & Dubinsky, 2018). That said, the use of French is declining since some younger Senegalese prefer to learn English to access a larger labor market (Poggensee, 2016).

By the postcolonial period, Senegal had developed a linguistic environment in which French and Wolof served different roles. Wolof remained the principal shared language of everyday communication across much of the population, while French retained importance in education, government, and social and economic mobility. Senegal’s extensive French-language education system exposed a substantially larger share of the population to French than in Haiti, but French did not need to replace Wolof as the country’s common spoken language. These conditions help explain why French became considerably more prevalent in Senegal than in Haiti, while remaining substantially less widespread than in Gabon.

GABON: CO-OPERATIVE COLONIALISM

Gabon provides a third case for examining how the conditions surrounding French use and acquisition developed over time.

Located on the western central coast of Africa, Gabon is significantly smaller than Senegal or Haiti, with a population of about 2.4 million as opposed to Senegal’s 19 million and Haiti’s 12 million (Central Intelligence Agency, n.d.-a). European settlers arrived in Gabon in 1472 and Gabon served as an important trading post where Europeans exchanged cloth, firearms, and alcoholic beverages for hardwoods and ivory. Gabon became active in the slave trade between 1760 to 1840, as the demand for slaves in the Caribbean, Cuba, Brazil, and other countries grew. (Weinstein et al., 2024). France stepped

in primarily to end the slave trade in Gabon. France had abolished slavery in its colonies in 1794 and was working with Britain and other countries to combat the slave trade in countries like Gabon that were still active in the slave trade (Buchanan, 2011). The French negotiated treaties with the heads of the two clans who were most active in the slave trade in 1841 (Yates, 2020).

Subsequently, protestant and catholic missionaries opened schools and brought French education and culture to Gabonese society (Gardinier, 1980). France continued to extend its influence working its way from the coast to inland areas, where there was more resistance to the French assimilation. Gabon and France reached a cooperative agreement to end colonialism in 1959 and Gabon became an independent country in 1960 (The Editors of Encyclopaedia Britannica, 2024).

Since independence, Gabon has struggled with instituting democracy and free and fair elections. It is widely believed that election results are rigged and a single party has been in power for decades. Though economically vibrant at one point, the economy has declined and about one third of Gabonese live below the poverty line (Resnick, 2023). Despite a history of rigged elections and a non-democratic process, Gabon joined the Commonwealth in 2022 (The Commonwealth, n.d.). In so doing, Gabon not only wants to expand its political, trade, social and diplomatic relations beyond the Francophonie network, but, most importantly, is committing to the Commonwealth's values of democracy, social equality, climate stewardship, and more (Bongo Ondimba, 2022).

THE JOURNEY OF LANGUAGE IN GABON: FRENCH DOMINATES

Prior to the arrival of the French colonists, there was no dominant language in Gabon due to its composition of dozens of clans, each of which spoke a different language. Even though the Fang language has a plurality, there are over 40 ethnic languages, many of which are spoken and not written (International Work Group for Indigenous Affairs, 2023). France's occupation of Gabon was generally peaceful and with the cooperation of the heads of the most influential clans (Yates, 2020). Unlike Senegal, where Wolof increasingly served as a common language across ethnic groups, no indigenous Gabonese language developed comparable national reach. As mobility and cross-ethnic interaction increased, this created a role that French could fill.

In the 1840s, formal education was mainly introduced by American Protestant and French Roman Catholic missionaries. The curriculum was taught in both English and French and focused mainly on religion, the 3Rs, and practical arts, with some geography, history, music, and drawing. However, by the 1880s, France wanted greater assimilation and nationalism and required French missionaries to increase the teaching of French language and culture. France also restricted the activities of non-French missionaries, and French replaced English as the medium of instruction in American missionary-led schools. In 1883, schools in Gabon were required to teach French for at least half the time and to use French as the language of instruction. Access to French-language education continued to expand, and by 1945 there were a number of lycées following the French education curriculum and offering primary,

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secondary, and college-level education. The French government also began providing scholarships for students from Gabon, Senegal, and other African countries to study in France (Gardinier, 1980).

With the establishment of a robust French-language educational system, generations of Gabonese children grew up learning French. At the same time, because no indigenous language had comparable national reach, French increasingly became a common language across linguistic groups. It also retained an important institutional role through government and education. French became especially useful as mobility and cross-ethnic interaction increased, including in cross-ethnic marriages between people who might otherwise have spoken different indigenous languages (Munoz-Moreno & Crawford, 2021). French also became essential as the common language of cross-ethnic marriages, which grew over time with increased mobility and modernization. Today, French is the country's only official language and is spoken by a large majority of the population.

By the postcolonial period, French had come to occupy several reinforcing roles in Gabon. No indigenous language had comparable national reach, allowing French to become a shared language across linguistic groups, while its continued use in government gave it institutional importance. At the same time, the expansion of French-language education exposed a large portion of the population to the language from an early age. These conditions help explain why French became deeply embedded in everyday and institutional life and eventually spread to roughly 80% of the population, despite Gabon's comparatively shorter period of French colonization.

ANALYSIS 1: NEED AND MEANS IN CONVERSATION WITH EXISTING SCHOLARSHIP

Existing scholarship helps explain important parts of the linguistic trajectories of Haiti, Senegal, and Gabon, but it does not fully explain why French spread so differently across the three countries. The following literature offers important explanations for language function, linguistic diversity, education, and state policy, while leaving room for the *need* and *means* hypothesis developed in this paper.

David Laitin's *Language Repertoires and State Construction in Africa* provides an important starting point. Rejecting the assumption that state-building inevitably produces one national language, Laitin argues that multilingual societies can settle into stable linguistic repertoires in which different languages serve different functions. His “3 ± 1” model anticipates a combination of an international or former colonial language, a national or regional lingua franca, and a local vernacular, with the exact repertoire varying according to whether these functions overlap for particular speakers (Laitin, 1992). Laitin therefore helps explain why French can remain important without necessarily displacing indigenous languages. His framework is primarily concerned, however, with which languages occupy which functions within a repertoire, rather than how widely one of those languages ultimately spreads through the population. Senegal and Gabon can both accommodate French within a multilingual repertoire while

still producing radically different levels of French proficiency. The question of what produces that difference remains open.

Alesina et al.'s measures of linguistic fractionalization illuminate another part of the puzzle. Their linguistic index measures diversity in mother tongues by estimating the probability that two randomly selected individuals speak different native languages. Senegal and Gabon are both highly linguistically fractionalized in their data, with scores of 0.696 for Senegal and 0.782 for Gabon (Alesina et al., 2003). Yet these similar scores conceal an important difference. Senegal possesses Wolof as a widely shared language across ethnic and mother-tongue boundaries, while Gabon historically lacked an indigenous language with comparable national reach. Linguistic fractionalization therefore captures the diversity of a population's linguistic origins, but not necessarily whether those groups already share a common means of communication. Two countries can contain similarly numerous linguistic groups while differing substantially in whether another shared language already performs that role.

A different strand of scholarship focuses on the institutional conditions under which languages spread. In *State-Building and Multilingual Education in Africa*, Ericka Albaugh demonstrates that language-in-education policies are themselves products of colonial inheritance, political incentives, and changing ideas about education. Her work shows that governments do not simply respond mechanically to linguistic diversity: they make choices about which languages enter schools and how extensively they are taught (Albaugh, 2014). Her subsequent cross-national research further demonstrates the importance of schooling for European-language acquisition, finding that educational exposure, particularly immersion-style systems, can strongly affect proficiency in the former colonial language (Albaugh, 2015). Albaugh therefore identifies an essential mechanism: a language's institutional status does not automatically translate into population-wide proficiency. Its diffusion depends in part on the educational system through which ordinary citizens encounter it.

Benjamin Hebblethwaite's analysis of Haiti demonstrates the same problem at the national level. Haiti formally maintained French as a major language of education even though the overwhelming majority of the population spoke Haitian Creole and many teachers themselves lacked strong command of French. He reports that 80 percent of primary and secondary teachers had low French proficiency and that 90 percent of students struggled to understand French (Hebblethwaite, 2012). Retention also falls sharply as French assumes a greater role in the curriculum. Hebblethwaite therefore demonstrates that the mere existence of a French-language school system is insufficient to spread French widely. Teacher proficiency, access to schooling, years of attendance, instructional resources, and the language spoken by students outside the classroom all condition whether formal policy translates into actual acquisition. He further shows that language policy can reinforce existing class structures, meaning that restricted access to French may persist even after the original colonial institutions that produced it have disappeared (Hebblethwaite, 2012).

These studies explain important pieces of the postcolonial language puzzle, but they leave a gap between them. Laitin explains the functional division of languages within multilingual repertoires; Alesina et al. measure the underlying degree of linguistic diversity; Albaugh examines the political and educational

institutions that determine which languages states promote; and Hebblethwaite shows how those institutions can succeed or fail in producing actual language acquisition. None of these approaches, however, directly explains variation in the population-wide persistence of a colonial language by considering simultaneously both the roles that language serves and the conditions that allow the population to acquire it.

The framework developed in this paper brings these strands together by considering the communicative, institutional, and economic roles French serves alongside the educational conditions that make its broader acquisition possible. The histories of Haiti, Senegal, and Gabon suggest that these forces do not operate independently. A strong institutional role does not necessarily produce widespread use, just as access to French-language education does not necessarily cause French to become the principal shared language of everyday communication. Instead, the effect of one condition appears to depend partly on the presence of the others.

Haiti and Senegal help isolate the importance of educational access. In both countries, a widely shared non-French language, Haitian Creole in Haiti and Wolof in Senegal, already performed much of the communicative role French might otherwise have filled. French also retained institutional importance in both. Yet Senegal developed a far broader and more sustained French-language education system than Haiti. The contrast suggests that when the communicative environment is relatively similar, greater exposure to French through education can substantially increase the language's reach without necessarily replacing the existing lingua franca.

Senegal and Gabon reveal the other side of the relationship. Both developed extensive French-language education and retained French in important institutional roles, but their communicative environments differed. Wolof already connected much of Senegal's population, while Gabon lacked an indigenous language with comparable national reach. French therefore expanded beyond education and government to fill a broader communicative role in Gabon. This comparison suggests that educational exposure alone does not determine how widely French spreads; the function available for the language to occupy also matters.

Taken together, the three cases show that no single historical mechanism is sufficient to explain the persistence of French. More importantly, the two comparisons isolate different parts of the framework: Haiti and Senegal show how differences in educational exposure matter when both countries already possess widely shared non-French languages, while Senegal and Gabon show how different communicative environments can produce different outcomes despite substantial French-language education in both. The comparison also weakens the length of colonization as a sufficient explanation, since Senegal experienced French colonial influence for considerably longer than Gabon while French ultimately became much more widespread in Gabon. The following section examines these differences more systematically by operationalizing the components of *need* and *means* through observable and numerical indicators.

ANALYSIS 2: APPLYING THE NEED AND MEANS FRAMEWORK

Operationalizing Need and Means

The analysis above suggests that different combinations of *need* and *means* contribute to the different prevalence of French in Haiti, Senegal, and Gabon. To examine these differences more systematically, this section operationalizes both conditions using observable indicators. The dependent variable is the prevalence of spoken French within the population. *Need* is measured through three components: communicative, institutional, and economic need. Communicative need is considered higher when no non-French language is spoken by a majority of the population and can therefore serve as a common language across groups. Institutional need is coded 1 when French holds official national-language status and 0 when it does not. Economic need is considered substantial when France accounts for at least 10% of either a country's imports or exports. Countries meeting this threshold are coded 1 for economic need, while countries below the threshold are coded 0. *Means* is assessed through educational access and exposure to French within that education. French educational exposure is coded 2 when French serves as the principal language of instruction through most or all of primary education for the majority of the national school system; 1 when French shares a substantial instructional role with another language, becomes a principal medium later in primary education, or serves as the principal medium in only part of a parallel national system; and 0 when French is primarily taught as a subject or has only limited use as a medium of instruction. These indicators are reported separately rather than combined into a single score because each captures a different component of the framework and should not be assumed to carry equal weight. In Table 1, the communicative-need classification is derived directly from the alternative shared language indicator: countries in which a non-French language is spoken by a majority of the population and can serve as a common language are classified as having lower communicative need for French, while those without such a language are classified as having higher communicative need. Similarly, institutional need is the coded representation of French official-language status.

The three countries differ substantially across the components of *need*. Haiti has relatively little communicative need for French because Haitian Creole is spoken across 90–95% of the population and already serves as a common language. French does hold official status alongside Haitian Creole, creating institutional need, but Haiti does not meet the economic threshold: France accounts for only 2.55% of Haitian exports and 1.14% of imports, giving Haiti an economic-need code of 0. Senegal similarly has lower communicative need because Wolof, spoken by approximately 80% of the population, serves as a lingua franca across much of the country. French, however, is the country's sole official language and therefore has strong institutional importance. Senegal meets the economic criterion because France accounts for approximately 12% of its imports, despite receiving only 1.6% of Senegalese exports, giving Senegal an economic-need code of 1. Gabon is the only one of the three countries to meet all three forms of need identified here. No indigenous language has comparable national reach, French is the sole official language, and France accounts for approximately 10.56% of exports and 13% of imports, resulting in an economic-need code of 1. The fact that French holds official status in all three countries is itself

important, as it shows that institutional status alone cannot account for the large difference in French prevalence between them.

Means also differs across the three cases. Educational access is measured using the primary completion rate reported through the World Bank by the UNESCO Institute for Statistics. This indicator is calculated by dividing the number of new entrants, excluding repeaters, into the final grade of primary school by the population at the official entrance age for that grade. It therefore serves as a proxy for the reach of sustained primary schooling rather than simply representing the percentage of children who graduate. The rates used here are approximately 52% for Haiti, 63% for Senegal, and 78% for Gabon. These differences suggest that children in Haiti have substantially less sustained access to primary schooling than children in Senegal, and especially Gabon. In practical terms, fewer children remain in formal schooling through the end of primary education, reducing sustained exposure to classroom instruction and to the environments through which French can be taught and reinforced. Exposure to French within those education systems also differs. Haiti is coded 1 for French educational exposure: Creole is increasingly institutionalized as the initial language of instruction, while French is taught from first grade and progressively becomes an additional language of instruction from fifth grade. Senegal is also coded 1 because French remains the principal language of instruction but increasingly shares that role with expanding bilingual French-Wolof education. Gabon is coded 2 because French serves as the principal language of instruction throughout the education system. *Means* therefore concerns not simply whether schools exist, but both the extent to which the population reaches those schools and the degree to which schooling provides sustained exposure to French.

Table 1

Indicator	Haiti	Senegal	Gabon
Communicative need	Lower	Higher	Higher
Alternative shared language ^a	Haitian Creole, 90-95%	Wolof, 80%	None comparable
Institutional need (0-1)^b	1	1	1
French official status ^b	Co-official with Haitian Creole	Sole official language	Sole official language

Economic need (0-1)^c	0	1	1
France share of exports ^c	2.55%	1.6 %	10.56%
France share of imports ^c	1.14%	12%	13%
Primary completion rate ^d	52%	63%	78%
French educational exposure (0-2)	1	1	2
French prevalence^e	5-10%	26%	~80%

Note. ^aCentral Intelligence Agency (n.d.-a). ^bEvery Country in the World. (n.d.). ^cWorld Bank (WITS) (n.d.-b).; The Observatory of Economic Complexity (n.d.). ^dWorld Bank (n.d.-a). ^eOrganisation internationale de la Francophonie (2026); (Hebblethwaite, 2021).

Taken together, the indicators produce a clear descriptive pattern. Haiti combines low communicative and economic need with the lowest level of educational access and more limited French-language exposure. Senegal differs primarily through stronger institutional and economic roles for French and broader educational exposure, while Gabon combines all three forms of need with the strongest educational conditions for acquiring the language. The progression across the three cases corresponds with the increasing prevalence of spoken French from Haiti to Senegal to Gabon.

These patterns are consistent with the *need* and *means* hypothesis, but they should not be treated as independent proof of it. Haiti, Senegal, and Gabon were used to develop the framework itself, meaning that the relationship observed across these three cases cannot on its own establish that *need* and *means* determine French prevalence more broadly. Some present-day indicators may also reflect the historical persistence of French rather than solely causing it.

The broader comparison that follows therefore examines whether similar patterns appear among other former French colonies. That comparison should likewise be understood as a preliminary test rather than definitive proof: the number of countries remains limited, and both *need* and *means* operate within different historical, political, and linguistic contexts. If the same relationships appear across those additional cases, however, they provide further evidence that the interaction of *need* and *means* is useful for understanding variation in the persistence of French.

To avoid duplicating information in the broader comparison, Table 2 does not include separate communicative-need or French-official-status columns. The alternative shared language column provides the evidence used to assess communicative need, while the institutional-need code directly represents French official-language status.

Table 2: Extending Need and Means to a Broader Comparison

Country	Alternative shared language ^a	Institutional Need ^b	Economic need (0/1)	France share of exports (%) ^c	France share of imports (%) ^c	Primary completion rate (%) ^d	French Educational Exposure (0-2)	French prevalence ^e
Democratic Republic of the Congo	Lingala (59%)	1	0	0.52%	1.93%	76%	1	51%
Algeria	Algerian Arabic (72%)	0	1	12.59%	9.33%	98%	1	33%
Morocco	Moroccan Arabic/Darija (90%)	0	1	20.48	10.57%	106%	1	36%
Cameroon	Cameroon Pidgin English (50%)	1	1	12.38%	7.62%	75%	2	41%
Ivory Coast (Côte d'Ivoire)	Dioula (> 50%)	1	0	3.67%	5.59%	80%	2	34%
Madagascar	Malagasy (99%)	1	1	14.49%	11.23%	61%	1	26%
Niger	Hausa (53%)	0	1	44.32%	24.18%	41%	1	13%
Burkina Faso	Moora (53%)	0	0	0.81%	7.37%	67%	1	24%
Mali	Bambara (80%)	0	0	0.44%	7.94%	48%	1	17%
Chad	Chadian Arabic (40-60%)	1	1	19.1%	9.76%	42%	1	13%
Tunisia	Tunisian Arabic (~100%)	0	1	22.81%	10.67%	94%	1	52%

Note. ^aCentral Intelligence Agency (n.d.-a). ^bEvery Country in the World. (n.d.). ^cWorld Bank (WITS) (n.d.-b).; The Observatory of Economic Complexity (n.d.). ^dWorld Bank (n.d.-a). ^eOrganisation internationale de la Francophonie (2026).

The broader comparison produces a mixed but informative pattern, with educational access showing the clearest relationship to French prevalence. The three countries with primary completion rates below 50% also have the lowest levels of French prevalence in the comparison: Niger has a completion rate of 41% and French prevalence of 13%, Chad 42% and 13%, and Mali 48% and 17%. By contrast, all six countries with completion rates of 75% or higher have French prevalence of at least 33%: Algeria at 98% completion and 33% French prevalence, Morocco at 106% and 36%, Cameroon at 75% and 41%, Côte d'Ivoire at 80% and 34%, the Democratic Republic of the Congo at 76% and 51%, and Tunisia at 94% and 52%. The primary completion indicator should not be interpreted as the literal percentage of children graduating, which is why values such as Morocco's can exceed 100%, but within this comparison the pattern suggests that the broader reach of sustained schooling is associated with greater population-wide exposure to French. French educational exposure adds another dimension, although it does not produce as clear a pattern on its own. Cameroon and Côte d'Ivoire, the two countries coded 2, have French prevalence of 41% and 34%, while countries coded 1 range from 13% in Niger and Chad to 52% in Tunisia. This suggests that the language used in school matters alongside how much of the population actually remains within the education system.

The components of *need* show considerably more variation when examined individually. Institutional need, for example, does not correspond consistently with French prevalence. Among countries where French holds official national status and institutional need is coded 1, French prevalence ranges from 13% in Chad to 51% in the Democratic Republic of the Congo. Countries coded 0 show an almost equally broad range, from 13% in Niger to 52% in Tunisia. Economic need produces a similar result. Niger and Chad both meet the 10% trade threshold, with France accounting for 44.32% of Niger's exports and 19.1% of Chad's, yet French prevalence is only 13% in each. In contrast, the Democratic Republic of the Congo is coded 0 for economic need, with France accounting for only 0.52% of exports and 1.93% of imports, while French prevalence reaches 51%. The existence of an alternative shared language is also not sufficient by itself to predict low French use. Tunisian Arabic is spoken by nearly the entire population, yet French prevalence is 52%; Moroccan Arabic reaches about 90% while French prevalence is 36%; and Algerian Arabic reaches roughly 72% while French prevalence is 33%. These differences suggest that communicative, institutional, and economic need are better understood as distinct reasons for using French whose effects depend on the broader conditions in which they operate.

Table 2 therefore provides preliminary support for the broader logic of the *need* and *means* framework while also showing why none of its components should be treated as independently determinative. The most consistent descriptive pattern in this sample appears in educational access: countries with the weakest access to sustained primary schooling generally have the lowest French prevalence, while higher-prevalence countries tend to have substantially broader educational access. Institutional status, trade connections with France, educational language policy, and the presence of another lingua franca appear less consistent when considered separately. Rather than weakening the framework, these differences reinforce its central premise that the persistence of

French is unlikely to result from any single condition alone. At the same time, the comparison remains limited in size, the indicators simplify complex linguistic and historical conditions, and the relationships shown here should not be interpreted as causal proof. The fact that similar relationships appear across countries that were not used to construct the original three-case framework nevertheless provides additional evidence that examining *need* and *means* together can help account for variation in the persistence of French after colonization.

CONCLUSION:

The comparison of Haiti, Senegal, and Gabon suggests that no single factor fully explains why French remains widespread in some former colonies while being spoken by only a small minority in others. The duration of colonization alone does not explain the difference. Senegal experienced French colonial influence for considerably longer than Gabon, yet French became substantially more widespread in Gabon. Similarly, linguistic diversity, institutional status, economic connections, or access to French education alone cannot fully account for these different outcomes. The central argument of this paper is instead that the persistence of French is better understood through the interaction of *need* and *means*: the roles French continues to serve and the opportunities populations have to acquire it.

The three cases show how different combinations of *need* and *means* can produce different linguistic outcomes. In Haiti, Haitian Creole became the shared language of the population while access to sustained French-language education remained limited, even as French retained institutional importance. Senegal developed much broader French-language education and maintained institutional and economic roles for French, but Wolof already served as a common language across much of the population. Gabon combined extensive French-language education and institutional use with the absence of another indigenous language of comparable national reach, allowing French to expand into everyday communication across linguistic groups.

The broader comparison provides additional, although preliminary, support for the *need* and *means* framework while also showing that its individual components do not operate consistently on their own. The clearest pattern appears in educational access: countries with the lowest primary completion rates generally also have the lowest prevalence of French, while countries with broader educational access tend to have higher French prevalence. Institutional status, economic connections with France, French-language instruction, and the presence of another lingua franca show greater variation when considered independently. These findings do not establish that *need* and *means* determine French prevalence, but they suggest that the interaction between reasons to use French and opportunities to learn it offers a useful way to explain why the language persists so differently across former French colonies.

Understanding why and how French persists after colonization provides not only a glimpse into history, but also a lens through which to understand a country's social, linguistic, educational, and economic circumstances. The different outcomes across Haiti, Senegal, Gabon, and the broader comparison suggest

that the legacy of a colonial language depends not simply on whether it was imposed, but on whether populations continue to have both reasons to use it and meaningful opportunities to acquire it.

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