Exploring the Possibilities for the Emergence of a Single and Global Native Language
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This book is the culmination of extensive research in linguistics, a field unknown by most people although all of us speak at least one language. Dreaming about a monolingual world is perhaps wild, let alone hoping for one to come to fruition. When I first thought about writing this book, I must admit that, despite my broad knowledge in linguistics, I had no idea where to begin. It gradually took shape as I gathered people's views on languages spoken around the world, and as I considered linguistic studies, and works previously done by great pioneers in the field. If their works do not specifically champion the emergence of a universal language, they helped me understand how language is acquired, develops, and changes. Then, I had a Eureka moment! I realized that my hypothesis of a monolingual world may not be a utopia after all. It comes with its challenges and its ups and downs, all right, as do everything else in life, but it's feasible. This book is essentially a hypothesis, but one that is based on facts, studies, and theories laid out by my predecessors and by so many other linguists who, like me, wish that the field becomes more popular.

I would like to show my gratitude to each one of these pioneers and these contemporary linguists. Also, many thanks to the National Center for Voice and Speech, Evolang, University of Pennsylvania, UNESCO, Unicef, University of Michigan, the Haitian Creole Academy, the Washington Post, the Guardian, Académie Grenoble, the International Organization of La Francophonie, and Educause.

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1. INTRODUCTION

Hello! Bonjour! Hola! If you say any one of these three words in any busy area of any major city, chances are that you will get someone’s attention. Language is a beautiful thing. It unites us in our differences. It is one of the most amazing features of human beings. It gives us the ability to communicate complex thoughts, emotions, and intent. That ability is written in our DNA. Humans have an innate predisposition to learn languages. Despite this biological predisposition, language had to first evolve. It took our species by surprise. It was sort of a Eureka moment, an epiphany when the first Homo Sapiens discovered he could communicate using his vocal apparatus. The need to communicate linguistically did not arise before that moment. There are two theories regarding the original motive behind the use of language by the first humans. The first theory posits that language emerged when the first humans began, first, to organize themselves by hunting together, making tools, and growing foods to survive, and, second, adapt to the environment, and be able to reproduce. According to the second theory, the first humans saw the necessity to use language to maintain family ties. This book isn’t about convincing the reader to accept any one of these two theories. However, I can state that in light of them, the use of language by the first humans was either exogenous because it was impacted by the environment or endogenous, spontaneous or nuclear because it came from the nucleus of the primitive society: the family. For starters, the Earth is 4.5 billion years old and humans have been around for (only) 290,000 years. However, language, as a means of communication, has only been around for roughly 60,000 years. Clearly, humans either didn’t develop language ability yet, or using their vocal cords was not appealing to them. Anyway, the moment they decided to emit oral sounds to communicate, linguistic differentiation, accent, and idiolect (the way each person talks) were born because the sounds would be imitated but reproduced with slight differences varying from person to the next. That would mark the beginning of multilingualism to some extents and the birth of a multimillennial linguistic problematic. Today, among speakers of the same language, communication, in terms of form, may not pose any concerns. But, when speakers of different languages must communicate among themselves, that becomes a challenge, sometimes insurmountable. Today, with globalization, the need to communicate quickly and efficiently has never been greater. Nations still take pride in their languages, but some people wish, openly or in their inner selves, there could be a universal or global language spoken by all human beings so that no important part of their messages be lost because of miscommunication or translation itself, which linguists view as a distortion or a “betrayal” of the original message in some cases. There is an Italian saying well-known by every linguist which states: “Traduttore, traditore”, literally: “Translator, traitor” (To translate [something] is to betray [it]).

The idea of a monolingual Earth isn’t a 21st century idea. According to Joan Acocella, “For thousands of years, people have taken this matter quite seriously. Ambitious organizations such as the Roman Empire and the Roman Catholic Church made sure that their members, whatever their mother tongue, learned a second, common language. More recently, various thinkers have
considered constructing universal languages from scratch. Schor gives a colorful summary. In the seventeenth century, Francis Bacon proposed that our written language switch to something like Chinese ideograms, bypassing words altogether, and John Wilkins, the first secretary of the Royal Society, proposed a new language with two thousand and thirty characters. Gottfried Wilhelm Leibniz said that we should use a pictographic system, a little like Egyptian hieroglyphs.”

A lingua franca (a language used by two or more groups to communicate, but that don’t speak the same language), would be helpful, but a true and unique language that would be the native language of everyone on the planet would be ideal. Three major factors are to be considered when it comes to the spread of a language: culture, economics, and influence. In the light of these factors the questions to ask is: will the Earth be monolingual in a strict sense or in a broad sense? a strict sense meaning all other languages besides that unique language will be either extinct because one nation, thanks to its influential culture and economic power will be able to spread its traditional language to the rest of the world, or a broad sense meaning will there be one language that everyone knows and can get by using it, a lingua franca? Considering the diversity of cultures, the differences between industrialized and emerging economies, which, of course, define the influence of nations on the international scene, is it possible that the potential universal language emerges as a result of these factors or from an international consensus, meaning the choice of a specific existing language or the construction of a new one? In the case of an existing language, could it be English, Spanish, or French, which are international languages (e.g. languages that are widely used, for a variety of purposes, by people in different countries, especially by people for whom it is not a mother tongue), or Chinese – comprised of Mandarin and Cantonese – which isn’t an international language, although one of the official languages of the United Nations and the most spoken language on the planet in terms of number of speakers? Will the world’s monolingualism emerge effortlessly or naturally, or is it wishful thinking or a utopia? The goal of this book is to consider the issue by, first, analyzing the mechanism and the dynamism of language or speech as a means of communication. This type of analysis will focus on how language is acquired, used, and evolved to determine whether such processes are conducive to the birth of a brand new global language. Then, the book will look at the initiatives – active and passive – taken by both previous and current scholars and linguists alike in an attempt to universalize human language. Thirdly, it will consider the barriers to such initiatives and the fate of the current major spoken languages such as English, French, Spanish, and Chinese before making any recommendations. Finally, should a global native language emerge – spontaneously or artificially – will it have a significant cultural impact on the world population? What would its limits be? The views that I present in this book are not intended to radically flout multilingualism – which we, as a species, inherited from our ancestors and that is also at the core of linguistics itself as a science – but rather, to show if multilingualism, thanks to the migration out Africa and the resulting proliferation of our species (Homo Sapiens) throughout the world, stemmed from the one and only language that was spoken by the small group of first humans before the African exodus, the reverse is also true, considering
that Mankind is currently converging towards the same horizon because of globalization, digital technology, the Internet, and cultural synthesis and might, therefore, end up speaking only one language again in the future. My approach is descriptive and prescriptive at the same time. That is, I describe how language, in the sense of speech ability is acquired and developed from birth to the age of 10, and how spoken language is also acquired and how it has evolved to become a multifaceted phenomenon as we know it today. On the other hand, I prescribe, through my recommendations, which include a linguistic awareness campaign plan, the methods and the means that can be utilized to promote or favor the emergence of a global language. Although it might be construed as a book within a book by some of you, the linguistic awareness campaign plan is essential because it is an excellent reference tool and a guide to spreading the message, informing and educating the public regarding the necessity of a global language, and peering into the outlook of the linguistic effort in the future. This book is not the promotion of an ideology nor does it suggest monolingualism as a dogma. It is an exhaustive analysis of what is, what should be, and what would be (meaning the implications of a potential universal native language) especially in the face of the 21st century’s environment, which is so dynamic and forces us to at least move at the same pace or left behind. Well, this dynamic is the product of our know-how, which itself is intricately linked to our communication skills. Communication is mostly done through language. Therefore, finding a way to facilitate communication among us, as a species, cannot nor should not be perceived as a detrimental endeavor. That is the purpose of this book, which also acknowledges the barriers that monolingualism might face and its limits, should it come to fruition for that matter. I invite you to read this book by putting on different hats every now and then and to look at it through different lenses in order to fathom its objective. After you read this book, you should be familiar with 1) how language in the sense of speech is acquired and developed by humans, and the two types of phenomena – mechanical or physical and psychological or cognitive – that are involved in the process; 2) how we use language phonetically, morphologically (spelling), or syntactically (structure, grammar, etc.), and how language is used on a large scale or worldwide (geolinguistics); 3) how spoken language has evolved and continue to evolve; 4) what has been done in the past in an effort to be linguistically united as a species (active initiatives); 5) how the dynamics of the environment influence the way we use language (involuntary or passive initiatives); 6) what are the barriers to our potential linguistic unification; and 7) what can be done by us to become linguistically united. In the discussion that follows, I use these points as a broad basis to present three different hypotheses: 1) the emergence of an internationally constructed and accepted language to finally get rid of intraspecific linguistic competition, which I have defined as the dynamics involved in the diversity of languages and their emergence within our own species, Homo Sapiens, 2) the emergence of an internationally constructed and accepted language because of interspecific linguistic competition, which I have defined as the ultimate joint effort by our species to make human language prevail should one or more animals species ever develop language ability, and 3) the emergence of a naturally-occurring international language resulting from the reversing of current trends and a return to basics, meaning a return to the time when we all spoke the same language.

My hypotheses are not presented in order, as that would require me to do the same analysis over and over again. Rather, I present them through each point by comparing, which a painstaking reading of
the book should reveal. All the topics that I explore in this book rotate around a single theme: “world languages, though different in their own ways and sometimes may be a source of cultural conflicts, have so much in common”. Every language is an open book, a revelation of the linguistic path that we have taken. They all have a common denominator: the use of sounds to represent both palpable and impalpable “stuff”. That’s the primary reason why I wanted to write a book on how speaking a single language throughout our world is possible both naturally and artificially. That decision did not stem from any resentment vis-à-vis foreign languages, as I consider myself a polyglot (or multilingual) and a multicultural person. I speak and understand three languages because I had been exposed to them for long periods during my life. I was educated, and I have lived in three different systems¹, which explains my multiculturalism. One thing is certain: the languages that I speak require me to use oral sounds for all of them. The reason for this analogy is to show that there is also a commonality between spoken languages, which I compare to music in the sense that the sounds that we emit to make ourselves understood must be orchestrated, otherwise, they would come out as screams or howls. Language is universal in the same way music is universal. No matter the instruments used to produce music, anyone can tell it is music if the notes are orchestrated, but if they are not orchestrated, anyone can also tell it is a cacophony or a noise. Language, like music is orchestrated sounds. When you hear spoken words, whether they are whispered or spoken aloud; whether they are English, French, Mandarin, Hindu, or Spanish words, you are sure of two things: you heard a sound (or sounds) and it came from a human’s mouth. Besides being a linguist, the extensive international experience that I have acquired (from having grown up in a bilingual country, having lived in the United States in several states, especially in New York City, an international language and cultural hub, and having lived in Canada, another bilingual country with a rich culture and traditions), helped me a great deal with putting this book together. In the following pages, I will attempt to convince you that we, as a species, can come together to create either new sounds or keep the ones we currently use, but attribute new meanings to them or use them to represent different types of these palpable and impalpable stuff that I mentioned above by combining current spoken languages according to their percentage of global speakers, effort that I label under my recommendations as a democratic, inclusive, and pluralistic one. As convincing as I may want to be, it is possible that your reading enables you to make your own deduction as to whether a global native language, either from an international consensus or from the natural and lengthy process of language contact, is possible. Again, I invite you to read this book with flexibility, indulgence, and open-mindedness. Until then, so long! Au revoir! Hasta la vista!

¹ Haiti (French), United States (English), and Canada, Quebec (French). Although today Haitian Creole is taught in school, in my time, it was not. But, I’m still a fluent speaker with a limited ability to read or write Haitian Creole, which, of course, puts me at a disadvantage in the face of the younger generations of Haitians.
2. MECHANISM AND DYNAMISM OF LANGUAGE

The mechanism and the dynamism of language are essential tools in speculations about the emergence of a potential single language that would be spoken by every inhabitant of our planet as their native language because the understanding of how we acquire language, how we use it, and how it evolves is propitious to speculations regarding the emergence of a global native language. Human beings perceive and process speech, especially at the cognition level, virtually the same way. Based on that fact, is it apposite to assume that language barriers can someday be eradicated either by promoting a universal language or spontaneously? There are so many factors to consider, which are determinants of such a phenomenon. For example, when a car engine does not perform optimally, there are two ways to look at the problem: consider the outside elements that contributes to the engine’s function, that is, the other apparatus of the car, its circuitry, etc., or look at the interior components of the engine. The second option is usually secondary. But, for a better understanding of the linguistic hypothesis at hand, I think it is best to proceed from inside out, consider the core components of our language skills first; then, progress towards the outside by considering the outside factors to see if it is realistic to ask: can our planet be monolingual? Under core components, this book considers particularly the mechanical and the cognitive ways by which we acquire language in the sense of speech (which is universal), and the dynamism involved, or the way language evolves (which is specific to each region of the world). Dynamism involves the process itself and the way language evolves. Thus, mechanism and dynamism overlap somewhere along the line.

Language acquisition

How do we acquire language? Language is acquired through a complex and lengthy process lasting several years (0 – 10) from the time we are born. That process involves both physical (or mechanical) and psychological (or cognitive) elements, meaning the perception and the comprehension of language in the sense of speech or the perception and the comprehension of a language or the languages, in a linguistic sense, that are spoken around us while growing up. But before going further, let me say a few words about language itself in terms of definition and basic properties.
Definition of language and its basic properties

What is language? Language is the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way. As such, language has specific inherent characteristics depending on whether it is written, spoken or expressed through signs. Written languages employ shape properties (e.g. shape of letters, symbols, or pictograms); spoken languages employ acoustic properties (e.g. the sound or the tone of vowels, syllables, and phonemes\(^2\), which, when combined, form words having distinct sounds); and sign languages employ movement properties (e.g. gestures used to express ideas, emotions, and intent). This book considers essentially written and spoken languages because they function independently of sign language. Also, I would like to point out the fact that other non-spoken languages also use acoustics. For example, African drum language and whistle-speech. In linguistics, “drum language is a term used to characterize a type of language in which a drum is used to simulate selected features of speech (primarily, tones and rhythms). The signals consist mainly of short, formulaic utterances, but are used to build up quite elaborate systems of communication, especially in Africa, both within villages and between communities. On the other hand, whistle-speech is a term used to refer to a stylized form of communication, in which whistling substitutes for the tones of normal speech; also called whistled speech. In some dialects (such as Mazatec, in Mexico) quite sophisticated conversations have been observed to take place using whistle-speech. Now, let’s see how the definition of language and its basic properties fit into the process involved in its acquisition.”

As a reminder, the language acquisition in question here is the acquisition of speech or the ability to learn how to verbally express oneself through a native language, usually from early childhood. Our communication features are exclusively human and the branch of linguistics that studies them is called anthroposemiotics, in contrast with zoösemiotics, which is a branch of semiotics that studies the features of human communication which, as the end products of an evolutionary series, are shared with animal systems of communication. While sometimes used interchangeably, language acquisition is not to be confused with language development involving the learning of linguistic rules such as grammar, phonology, and semantics. Speech ability or language acquisition is usually complete by the end of early childhood, whereas speech development is a much longer process lasting until the age of 10. But what is the mechanical process involved in language acquisition? Some scholars believe that language acquisition starts way before we’re even born. In a study published in May 2017, Gustafson, Kathleen et al. “measured changes in fetal heart rate to assess discrimination of two rhythmically different languages (English and Japanese). Two-minute passages in English and Japanese were read by the same female bilingual speaker […] The

\(^2\) A sequence of sounds in a word. For example, the word *doctor* has two distinct sounds, each one constitutes a phoneme.
fetal magnetocardiogram was reconstructed following independent components analysis decomposition [...] A significant interaction between condition and passage indicated that the English–Japanese condition elicited a more robust interbeat interval change for passage 2 (novelty phase) than for passage 1 (familiarity phase), reflecting a faster heart rate during passage 2, whereas the English–English condition did not. This effect indicates that fetuses are sensitive to the change in language from English to Japanese. These findings provide the first evidence for fetal language discrimination as assessed by fetal biomagnetometry and support the hypothesis that rhythm constitutes a prenatally available building block in language acquisition.” What that means is this is valid for any language a person is exposed to as a child and constitutes a common denominator when it comes to language acquisition ability, meaning that humans can, at a very early stage of their development, tell apart and learn a variety of languages even though the physical features that help us acquire language are still embryonic. Moreover, that might explain why it is easier for children to take full advantage of the anatomical features involved in language acquisition.

Besides this definition of language in the sense of speech, meaning the ability to produce orchestrated and intelligible sounds through the mouth, language is also “a system of conventional spoken, manual, or written symbols by means of which human beings, as members of a social group and participants in its culture, express themselves. The functions of language include communication, the expression of identity, play, imaginative expression, and emotional release.” According to David Crystal and Robert Henry Robins, “In most accounts, the primary purpose of language is to facilitate communication, in the sense of transmission of information from one person to another. However, sociolinguistic and psycholinguistic studies have drawn attention to a range of other functions for language. Among these is the use of language to express a national or local identity (a common source of conflict in situations of multiethnicity around the world, such as in Belgium, India, and Quebec). Also important are the “ludic” (playful) function of language—encountered in such phenomena as puns, riddles, and crossword puzzles—and the range of functions seen in imaginative or symbolic contexts, such as poetry, drama, and religious expression ... Language interacts with every aspect of human life in society, and it can be understood only if it is considered in relation to society ... Because each language is both a working system of communication in the period and in the community wherein it is used and also the product of its history and the source of its future development, any account of language must consider it from both these points of view.”

Mechanical or physical aspect of language acquisition

The mechanical process of language acquisition is also shown by which parts of the human body (or the vocal tract) are involved in the articulation of specific words. An example would be the
articulation of consonants. Examples are [p], pronounced with the lips (labial); [t], pronounced with the front of the tongue (dental); [k], pronounced with the back of the tongue (guttural); [h], pronounced in the throat. The articulation of a word may require a combination of some or all of these tracts, including the palate, lip rounding, sides of the tongue, etc. For example, the articulation of the word wasp requires more than two tracts. How to work and become familiar with these tracts requires time, and this is achieved by the end of early childhood (5 – 6 years old). Toddlers learning to talk are more comfortable with labials, dentals and gutturals before they learn how to twist their tongues. This is explained by something called the fis phenomenon or, more commonly, baby talk, whereby a word like fish will be most likely be pronounced fis by a toddler as he cannot make the two sides of his tongue touch his palate yet. Before children can even put words together to make a sentence, they use holophrases or grammatically unstructured utterances, usually consisting of a single word. Typical holophrastic utterances include dada, baba, gaga, googoo, etc.

The anatomical features involved in the production of speech sounds, including the lungs, trachea, oesophagus, larynx, pharynx, mouth and nose, are referred to as vocal organs. One of the most, if not the most, mechanical features of speech is the apparatus called vocal bands (also called vocal cords or vocal folds), which are two muscular folds running from a single point inside the front of the thyroid cartilage (Adam’s apple, larynx or voice box) backwards to the front ends of the arytenoid cartilages. The vocal folds are very flexible, being shaped by the combined activities of the associated cartilages and muscles. The space between them is known as the glottis. Although the chest and the lungs aren’t vocal organs, they play a crucial role in the production of speech or sound, for example when the chest muscles are contracted to allow the lungs to exhale air. This is called chest pulse.

The mechanical use of language can be measured thanks to a variety of techniques involving the use of such instruments as electroglottograph, electrokymograph, electromyograph, and electropalatograph. An electroglottograph is an instrument used in articulatory phonetics for registering the vibratory movements of the vocal folds; also called a glottograph. (Electro)glottography measures changes in electrical resistance across the neck, using a pair of electrodes placed on the skin on either side of the neck just above the thyroid cartilage. (Electro)glottographic data is printed out on an (electro)glottogram. The same process is also
referred to as (electro)laryngography, the difference between the terms reflecting different interpretations of the relative roles of the glottis and larynx being measured by the instrument. (Electro)laryngographic data is printed out on an (electro)laryngogram. In all cases, the shorter versions are the standard usage. An *electrokymograph* is an instrument used in articulatory phonetics to enable a record to be made of the changes in oral and nasal airflow during speech. Electrokymography involves the use of a face-mask which can differentiate the two kinds of flow, and associated equipment which can measure air volume and velocity, and record it visually (as an electrokymogram). It is a development of the earlier kymograph. An *electromyograph* is an instrument used in phonetics to observe and record muscular contractions during speech. Electromyography involves the application of electrodes (surface pads or needles) to the muscles involved in the vocal tract, and the analysis of the electromyographic traces produced visually (electromyogram). An *electropalatograph* is an instrument used in articulatory phonetics to enable a continuous record to be made of the contacts between tongue and palate during speech. Electropalatography involves the use of an artificial palate containing several electrodes, which register the tongue contacts as they are made: the results are presented visually as electropalatograms.

Authors, like Jana M. Iverson, suggest that language development and physical development goes hand in hand in the developing child. In her review article, *Developing language in a developing body: the relationship between motor development and language development*, she argues that “During the first eighteen months of life, infants acquire and refine a whole set of new motor skills that significantly change the ways in which the body moves in and interacts with the environment ... that motor acquisitions provide infants with an opportunity to practice skills relevant to language acquisition before they are needed for that purpose; and that the emergence of new motor skills changes infants’ experience with objects and people in ways that are relevant for both general communicative development and the acquisition of language ... that there are links between achievements in the cognitive and social communication domains and the emerging language system ... During the first eighteen months of life, however, infants also acquire and refine a whole set of new motor skills that fundamentally transform their experiences with objects and people. Indeed, independent locomotion is one of, if not the developmental event most eagerly anticipated by proud parents; and, along with the acquisition of language, it is one with the greatest impact on the infant’s world ... that the development of language should be viewed in the context of the body in which the developing language system is embedded. In infancy, there are significant changes in the ways in which the body moves in and interacts with the environment; and these may in turn impact the development of skills and experiences that play a role in the emergence of communication and language. In the sections that follow, I review literature and reinterpret published findings related to the development and refinement of motor skills in infancy and their potential impact on the developing language system. The central claim is that changes in motor skills (i.e. achievements and advances in posture, independent locomotion and object
manipulation) provide infants with a broader and more diverse set of opportunities for acting in the world. These opportunities provide contexts for acquiring, practicing and refining skills that contribute, both directly and indirectly, to the development of communication and language.”

Iverson gives the following examples, as a result of her observations:

1. At twenty weeks, infants begin to sit with support. Vocalizations, which previously consisted of vowel-like cooing sounds, are now interspersed with consonant-like sounds.
2. At 0;6, infants begin to sit independently and are able to lean forward and reach unilaterally while sitting. Cooing changes into babbling that resembles single-syllable utterances; but neither vowels nor consonants have fixed recurrences.
3. At 0;12, children can walk when held by one hand and mouthing of objects has almost ceased. Vocalizations contain an increased frequency of occurrence of identical sound sequences; and words (e.g. mamma or dadda) begin to emerge.

Furthermore, she goes on to say that “With regard to the second principle, Lenneberg (1967) noted that while manual skills in early childhood show improved coordination relative to those in infancy, manual dexterity is still quite immature on an absolute scale, falling far below future levels of accomplishment. By contrast, speech articulation, which requires extremely precise and rapid movements of the lips and tongue in finely tuned coordination with activity in the laryngeal and respiratory systems, is all but fully developed by age 3;0. Lenneberg interpreted this difference between manual and speech articulatory skills as an indication that the development of speech control is independent of the development of hand and finger control … While Lenneberg’s (1967) analysis was based on general patterns in the average age of motor and language milestone achievement, his argument gained further support from longitudinal studies of individual differences in early language and motor development carried out by Bates, Benigni, Bretherton, Camaioni & Volterra (1979) and Bloom (1993). In both studies, measures of motor development were included as proxy variables for physical and neural maturation with a view to demonstrating that observed relationships between aspects of cognitive, communicative and language development were not simply a product of global maturation.”

These observations are indeed relevant and provide proof that the more inquisitive and adventurous a child is around the house – especially two-year old children – the easier it becomes for them to elicit new words from the people around them and, thus, make more and quicker associations. In that regard, Iverson notes that “developments in language were tracked by transcribing word use at each session and identifying the ages of onset of first words (i.e. the session at which one conventional word was used at least twice) and the vocabulary spurt (i.e. the session at which twelve new words had been added since the previous visit, after reaching a baseline of twenty words) for each child. This permitted the examination of developmental changes in action on objects in relation to both chronological age and language level … There was a clear developmental progression in infants’ action that was closely linked to achievements in language. During the pre-
speech period, the vast majority of infants’ object displacements involved taking things apart. With the advent of first words, however, putting things together not only became progressively more frequent, but children also began to put objects together in ways that they had not previously seen them combined (e.g. putting a bead inside a nesting cup rather than putting one nesting cup inside another). During the vocabulary spurt, constructions began to make use of specific features rather than generic characteristics of objects (e.g. putting a bead on a string rather than simply placing the bead inside a nesting cup). This developmental progression in action on objects and its association with achievements in language was observed in all of the children despite substantial individual differences in rate of language acquisition. Bloom (1993) has argued that this parallelism reflects common developments in underlying cognition, specifically changes in object concepts and advances in the ability to access this knowledge for actions with both objects and words.”

Moreover, Iverson shows the relationship between motor development and language by citing the following observation: “spectrographic analyses revealed that vocalizations changed in three major ways after infants began to sit on their own. First, infants began to demonstrate greater control over utterance production, as exemplified in decreased length of individual utterances, greater uniformity in duration, and increased variation in the number of utterances produced in a single breath. Second, there was an overall increase in the frequency of CV units and a corresponding decrease in simple vowel production. Vowel duration also decreased, with production of single, elongated vowels held over the entire length of an expiration becoming much less frequent. And as infants began to produce vowels that were relatively short and clipped, instances of two or more vowels per breath group became more common ... Finally, the number of CV syllables per breath group increased and CVs became shorter and more consistent in duration just before the onset of unsupported sitting. As CV units became more punctate and less variable, there was a corresponding decline in CV repetitions
across the post-sitting observations. Thus, as infants became more skilled at maintaining an upright posture, CV production became more consistent; and relative consistency in production is, of course, a hallmark of skilled, controlled behavior … Taken together, these findings suggest that the onset of unsupported sitting initiates a period of exploration and change in infant vocalization.

When infants are first able to maintain an upright sitting position, they ‘discover’ new possibilities for vocal production in the very act of vocalizing. The proprioceptive and auditory feedback generated by these initial experiences then leads to continued exploration of the vocal possibilities generated by enhanced lung capacity and repositioned speech articulators (perhaps most especially the mandible and tongue, which are highly relevant for CV production; e.g. MacNeilage & Davis, 2000). In the course of this exploration, as Yingling (1981) put it, ‘the infant’s “practice-play” with speech patterns …become[s] more complex, specifically involving series of sound variations’ (p. 97). In addition, as infants attempt to match target sounds from their ambient language in their own production, they begin to hone in on timing parameters that are present in that language. Indeed, data from Yingling’s final post-sitting session indicated that, in a number of important respects, infant vocalizations were coming to resemble those of adult speech (e.g. embedding of multiple utterances within a breath group, more punctate and word-like utterances) … Infants regularly vocalized while mouthing objects. On average, 28% of vocalizations produced during the observations occurred during instances of mouthing, and thirty-nine of the forty infants vocalized while mouthing. Thus, the co-occurrence of object mouthing and vocalization is a robust developmental phenomenon. And although the proportions of vocalizations containing a CV were similar for mouthing and non-mouthing vocalizations, vocalizations co-occurring with mouthing were significantly more likely to contain a supraglottal consonant and to include a greater variety of supraglottal consonants than those co-occurring with non-mouthing (though all were among those typically produced by young infants) … This pattern of results suggests that not only is object mouthing an effective mechanism of object exploration for infants aged 0;6 to 0;9, it may also play a role in infants’ exploration of their own vocalizations. Although infants undoubtedly explore vocalizations produced both with and without mouthing, mouthing may uniquely influence co-occurring vocalizations in a way that facilitates consonant exploration. Specifically, mouthing may bring about vocal tract closure and affect change in articulatory postures in association with object position, shape and movement. Moreover, the availability of multimodal feedback in mouthing vocalizations may encourage consonant exploration as infants vary routinely produced features of consonant articulation (i.e. place, manner and voicing).”

Iverson summarizes her findings, saying that “developmental advances in motor skill in infancy create a broad range of novel experiences and opportunities for exploration that may have implications for language development. With the attainment of new postural and locomotor skills come opportunities for infants to experiment with vocal production in a different biomechanical configuration, gain experience with distal communication, and play an increasingly active role in the communicative process. All of these are relevant to the development of language. Furthermore,
infants’ propensity to engage with and actively explore objects in the environment using hands and mouths may provide information not only about those objects, but about the infants’ own vocalizations. In short, as infants move through and engage with their surroundings (behaviors that are traditionally situated in the domain of motor development), these everyday activities and experiences have effects that extend beyond the motor domain to the developing communicative and language systems.”

However, she expresses some reserve by saying that “motor development is neither necessary nor sufficient for language development in the logical sense by no means minimizes its role in relation to the emerging language system. Indeed, lack of necessity and sufficiency is a central tenet of a systems approach to development, which explicitly rejects simple cause and effect models in favor of the notion that multiple and varying factors contribute to the emergence and development of a given behavior. Behavior and development, in other words, represent the confluence of multiple skills that are softly assembled as the child acts and interacts in a particular environment at a given moment in time (e.g. Thelen & Smith, 1993). On this view, motor skills are one among several sets of abilities that are involved in language; and although they are normally participatory in language development, should any given pathway be blocked, there is sufficient flexibility in the organization of the system to yield a myriad of possible (yet still normative) developmental trajectories leading to the emergence of language.” Overall, it is relevant to note that “Delays in motor development have been traditionally conceptualized as indices of ‘delayed maturation’ or ‘neurological soft signs’, particularly when they co-occur with language difficulties; and indeed, motor difficulties are among the exclusionary criteria in widely used research definitions of specific language impairment (SLI; Leonard, 2000). The fact remains, however, that a substantial proportion of children with SLI exhibit co-occurring motor difficulties (e.g. Hill, 1998).”

On the other hand, the mechanical aspect of language acquisition has been taken to another level by James Asher, a professor emeritus of psychology at San José State University, who used a method called total physical response (TPR). It is important to note that the method does not apply to language acquisition in the sense of speech, but rather in the sense of foreign language learning. The method “is based on the coordination of language and physical movement. In TPR, instructors give commands to students in the target language, and students respond with whole-body actions. The method is an example of the comprehension approach to language teaching. The listening and responding (with actions) serves two purposes: It is a means of quickly recognizing meaning in the language being learned, and a means of passively learning the structure of the language itself. Grammar is not taught explicitly, but can be learned from the language input. TPR is a valuable way to learn vocabulary, especially idiomatic terms, e.g., phrasal verbs. Asher developed TPR as a result of his experiences observing young children learning their first language. He noticed that interactions between parents and children often took the form of speech from the parent followed by a physical response from the child. Asher made three hypotheses based on his observations: first, that language is learned primarily by listening; second, that language learning must engage
the right hemisphere of the brain; and third, that learning language should not involve any stress. Total physical response is often used alongside other methods and techniques. It is popular with beginners and with young learners, although it can be used with students of all levels and all age groups.” (Wikipedia, 2017)³

Thus, “James Asher developed the total physical response method as a result of his observation of the language development of young children. Asher saw that most of the interactions that young children experience with parents or other adults combine both verbal and physical aspects. The child responds physically to the speech of the parent, and the parent reinforces the child’s responses through further speech. This creates a positive feedback loop between the parent’s speech and the child’s actions.” (Byram 2000, pp. 631-633.). “Asher also observed that young children typically spend a long time listening to language before ever attempting to speak, and that they can understand and react to utterances that are much more complex than those they can produce themselves.” (Richards & Rodgers 2001, p. 74.).

The above analysis focuses mainly on motor skills based heavily on the anatomy of the vocal organs and their efficiency. I’d like to also point out that speech and listening go hand in hand. I mean by listening, paying attention to the message being conveyed to you by a sender. But don’t deaf people also pay attention to their interlocutors even though the latter use sign language? We must therefore discern between paying attention thanks to the eyes and paying attention thanks to the ear or hearing, which is indispensable to speech for without the ability to hear, speech is impossible and will not develop. The process of hearing and the anatomy of the ear are also part of the mechanical and physical aspect of acquisition of language. “For your child to speak and communicate verbally, she needs a few things in place – like hearing. Hearing is one of the most critical building blocks for effective oral communication. To most of us, it is absolutely effortless. Unlike talking, which develops over years through a series of changes, hearing begins to develop in the womb. It is part of an incredibly complex system that involves tiny bones and cells in the ear and neural pathways to the brain, and if your child’s auditory system is not working fully, many of her communication abilities can be compromised. Difficulty hearing can have an impact on social interaction and academic performance in children. Good hearing brings about timely speech and language development – everything from mastering correct pronunciation to learning proper grammar to laying the groundwork for reading. Your child’s ability to hear can have a profound effect on his listening comprehension and his behavior. This includes being able to follow directions and pay attention to the teacher in school … Hearing, simply defined, is the ability to detect sound. Sound is the occurrence of vibration of air particles.” MacRoy-Higgins & Kolker (2017).

³ For more information on TPR’s background, principles, procedure, teaching materials, etc., please visit: https://en.wikipedia.org/wiki/Total_physical_response
I gave above a brief description of the anatomy of the vocal apparatus. It is appropriate to do the same for the anatomy and physiology of the ear, as I just explained, speaking and hearing go hand in hand.

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<th>Anatomy and physiology of the ear – Source: Stanford Children’s Health</th>
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<td>Semicircular Canals</td>
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<td>External Acoustic Meatus</td>
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The ear is the organ of hearing and balance. The parts of the ear include:

- **External or outer ear**, consisting of:
  - Pinna or auricle. This is the outside part of the ear.
  - External auditory canal or tube. This is the tube that connects the outer ear to the inside or middle ear.

- **Tympanic membrane** (also called the eardrum). The tympanic membrane divides the external ear from the middle ear.

- **Middle ear** (tympanic cavity), consisting of:
  - Ossicles. Three small bones that are connected and transmit the sound waves to the inner ear. The bones are called:
    - Malleus
    - Incus
    - Stapes
  - Eustachian tube. A canal that links the middle ear with the back of the nose. The eustachian tube helps to equalize the pressure in the middle ear. Equalized pressure is
Anatomy and physiology of the ear – Source: Stanford Children’s Health

needed for the proper transfer of sound waves. The eustachian tube is lined with mucous, just like the inside of the nose and throat.

- Inner ear, consisting of:
  - Cochlea (contains the nerves for hearing)
  - Vestibule (contains receptors for balance)
  - Semicircular canals (contain receptors for balance)

How do we hear?

Hearing starts with the outer ear. When a sound is made outside the outer ear, the sound waves, or vibrations, travel down the external auditory canal and strike the eardrum (tympanic membrane). The eardrum vibrates. The vibrations are then passed to three tiny bones in the middle ear called the ossicles. The ossicles amplify the sound and send the sound waves to the inner ear and into the fluid-filled hearing organ (cochlea).

Once the sound waves reach the inner ear, they are converted into electrical impulses, which the auditory nerve sends to the brain. The brain then translates these electrical impulses as sound.

Now, the question that I would like to ask is: why is the mechanical aspect of language important in the exploration of the possibilities for the emergence of a single and global native language? The answer lies within the fact that these processes are the same for all humans, irrespective of their environment. Understanding the mechanical elements that play a role in language acquisition is all the more important if we want to imagine a world united by one language. These mechanical features are inherent characteristics to all human beings, except, of course, in the case of birth defect or accidents. These elements must function together as one system for us to properly use language or speech to communicate. The mechanical acquisition of language or speech is complete by the time someone is six years old. But, there is also a psychological aspect that plays a role in language acquisition that must be considered, because it completes the mechanical aspect, or to be exact, they complete each other.

Psychological or cognitive aspect of language acquisition or psycholinguistics

I also explain the role played by psycholinguistics in the section entitled evolution of language (see below), but its role is even more important in language acquisition, meaning the acquisition of speech, which is inherent to all human beings. Psycholinguistics or psychology of language is the study of the relationships between linguistic behavior and psychological processes, including the process of language acquisition. The term psycholinguistics was coined in 1936 by Jacob Robert Kantor in his book An Objective Psychology of Grammar and started being used among
his team at Indiana University, but its use finally became frequent thanks to the 1946 article “Language and psycholinguistics: a review,” by his student Nicholas Henry Pronko (Pronko, N. H. [1946]. Language and psycholinguistics: a review. Psychological Bulletin, 43, May, 189-239). It was used for the first time to talk about an interdisciplinary science "that could be coherent" as well as in the title of Psycholinguistics: A Survey of Theory and Research Problems, a 1954 book by Charles E. Osgood and Thomas A. Sebeok (Murray, D. J. [2001]. Language and psychology: 19th-century developments outside the Germany: A Survey [pp. 1679-1692]). Psycholinguistics plays a role in 1) phonetics and phonology, concerned with the study of speech sounds; 2) morphology, the study of word structures, especially the relationships between related words and the formation of words based on rules; 3) syntax, the study of the patterns which dictate how words are combined to form sentences; 4) semantics deals with the meaning of words and sentences. Where syntax is concerned with the formal structure of sentences, semantics deals with the actual meaning of sentences; and 5) pragmatics, concerned with the role of context in the interpretation of meaning. In modern linguistics (the scientific study of language), psycholinguistics, along with cognitive factors, play an important role in cross-linguistic study. Picture naming is a good example thereof. In their article A new on-line resource for psycholinguistic studies, Szekely A, Jacobsen T, D’Amico S, et al. states that Picture naming is a widely used technique in psycholinguistic studies. Here, we describe new on-line resources that our project has compiled and made available to researchers on the world wide web at http://crl.ucsd.edu/~aszekely/ipnp/. The website provides access to a wide range of picture stimuli and related norms in seven languages. Picture naming norms, including indices of name agreement and latency, for 520 black-and-white drawings of common objects and 275 concrete transitive and intransitive actions are presented. Norms for age-of-acquisition, word-frequency, familiarity, goodness-of-depiction, and visual complexity are included. An on-line database query system can be used to select a specific range of stimuli, based on parameters of interest for a wide range of studies on healthy and clinical populations, as well as studies of language development [...]. The International Picture-Naming Project (at the Center for Research in Language of the University of California, San Diego) has conducted a series of picture-naming studies in an effort to build databases that can be used in future cross-linguistic research. This note briefly describes the resources that the project has compiled and made available to researchers on the world wide web (http://crl.ucsd.edu/~aszekely/ipnp/) or has documented in publications to date. We present a wide range of picture stimuli and related reaction time norms in seven languages [...] Picture naming is a widely used technique for the investigation of lexical retrieval, in normal children and adults, and in various clinical populations. Timed studies of picture naming were among the first paradigms ever used to study the mental chronometry of language processing, from pioneering studies by Cattell, through the work of Snodgrass and colleagues (Snodgrass & Vanderwart, 1980; Snodgrass & Yuditsky, 1996), to recent studies investigating covert and overt picture naming using functional magnetic resonance imaging and event-related brain potentials [...] The CRL International Picture-Naming Project adapts this technique for use in cross-linguistic studies of
lexical access. The project has collected data from recognition (picture–word verification) and retrieval (picture naming) paradigms, in isolation and in phrase and sentence contexts. These behavioral measures have been applied across age levels and clinical populations; they have also been adapted for use with functional imaging techniques such as ERP and fMRI.”

- **Alexander Luria’s contribution to psycholinguistics**

Alexander Luria⁴ contributed a great deal to the field of psycholinguistics. Botydsir L. J. Kaczmarek, in “*Extension of Luria’s Psycholinguistic Studies in Poland*”, sums it up in these terms: “One of Luria’s basic interests was the organization of human cognitive processes, and thinking in particular. He believed that language and thought are closely related, and hence the manner in which we speak reflects the way we think. To verify this assumption, he and his collaborators performed a number of interesting psycholinguistic experiments with subjects of various ages and cultural backgrounds. The tasks used made the evaluation of both receptive and expressive language possible. The Narrative Ability Test described here stems from Luria’s observations to a considerable degree. The test was administered to preschool children (N = 106), schoolchildren (N = 143), adolescents (N = 89), adults (n=126), and older persons (N = 175). Findings of the 20 - year studies with normal and deviant populations indicate close relationships among thought, language, and self-control. It was found that difficulty in developing narratives corresponds with a disability to process complex information. Correlations between narrative skills and age, sex, and social background were also noted [...] During my 1974 visit to Professor Luria’s laboratory, some of us were asked by our host to read manuscripts of his two latest books (Luria, 1975, 1979) and to give our comments. Unfortunately, I was too young and too shy at that time to express any criticism, even though I did not share the professor’s fascination with Chomsky’s (1965) model of transformational generative grammar. Besides, I ascertained that this fascination was not deeply rooted and sometimes meant simply the replacement of the old terms. For example, the term deep structure was used in place of inner speech, yet its sense remained the same as in older books by Luria (1966,1970). At the same time, I found Luria’s considerations on relationships among language, thought, and behavior discussed in the text Language and Cognition (1979) extremely interesting. The book revealed to me other facets of Aleksandr Romanovitch’s broad research, namely, his interest in developmental as well as cultural psychology. The studies, performed in Central Asia with another prominent Soviet psychologist, L. S. Vygotsky, showed that a number of logical problems, with which most of us struggled at school, had little to do with

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⁴ Alexander Romanovich Luria was a Soviet neuropsychologist and developmental psychologist. He was one of the founders of Cultural-Historical Psychology, and a leader of the Vygotsky Circle, also known as "Vygotsky-Luria Circle", which was an influential informal network of psychologists, educationalists, medical specialists, physiologists, and neuroscientists, associated with Lev Vygotsky (1896–1934) and Alexander Luria (1902–1977).
the way people process information in natural circumstances (Luria, 1976, 1979). Accordingly, peasants who were not taught to accomplish such tasks simply refuse to solve them. This finding was further confirmed in the experiments carried out in Poland by Tlokiniski (1995), who used techniques elaborated by Zeigarnik (1962), a close collaborator of Luria's and Vygotsky’s. Tlokiniski examined schoolchildren, manual workers, and college students, giving them varied linguistic tasks that included statements expressing spatial and time relations, double negation, conversion of time, formal similarity of subject and object, comparison, and possession. Other tasks required evaluation of figurative phrases as well as assessment of relations occurring among words presented to the subjects. It was found that all the preceding tasks were difficult for the uneducated persons […] These findings are of great importance in connection with another significant aspect of Luria’s studies: his investigation of the role of language in the regulation of human behavior (Luria, 1961, 1979). He performed a number of experiments with both normal populations of children and populations of children who were developmentally retarded to verify the assumption that language is responsible for our ability to plan and to control our actions. This conjecture was further pursued in a series of studies on patients with brain damage, with special emphasis on the frontal lobes (cf. Luria, 1966). One word of comment may be needed here. It is well known that Luria devoted much of his research to the investigation of aphasic disorders (Luria, 1970,1975). This was closely connected with his belief that we may learn about the nature of psychological processes only when they are disrupted. Otherwise, their course is so smooth and fluent that we are not able to see that they constitute a complex chain of interconnected functions. It might be worth mentioning that Luria stressed the need to revise his classification of aphasia, pointing to its neurophysiological basis, because he believed that linguistic factors should be taken into account first.”

“Many psychologists stress the significance of language in programming and performing willful actions. The importance of language for the mediation of human behavior has been heavily stressed by Luria (1961,1979). The main idea behind his research is that a child is at first instructed to do various tasks by an adult, then learns to give him – or herself – linguistic commands. These self-instructions are at first uttered aloud and then gradually take the form of internal covert instructions. On the basis of Luria's writings, four stages of development of the regulatory function of language can be distinguished:

1. Between the ages of 1 and 2 years, instructions given by an adult do not play the regulatory role as yet, and they may lead to a paradoxical reaction because a child is not able to stop an action he or she was asked to complete. Thus, if an 11-month old child occupied with putting colored circles on a stick is told to stop, he or she will continue putting them on, and a louder command will only hasten the original action. A child may also start reaching for an object in reaction to the instruction of an adult, but he or she might eventually grasp the object that is more brightly colored and thus attracts his or her attention.
2. An ability to inhibit a motor action is established at the age of 2 years, but children have problems with fulfilling more complex instructions. In particular, they are not able to stop from an immediate action after being given a command: "When the light appears, press the bulb." They simply squeeze the bulb, not waiting for the light to appear.

3. The child older than 3 years is capable of inhibiting the motor reactions, but he or she is not able to discriminate the responses in accordance with the color of the stimulus lights. Hence, if the child is asked to press a rubber bulb in reaction to the red light, and not to press it when the light is blue, he or she cannot refrain from pressing it whenever any of the lights appears. Also, self-commands "press" and "don't press" are not of any help because both trigger the motor response regardless of the meaning. This is so even though the child can repeat the instruction and explain it. If, however, the same commands are given by an adult, the child is able to accomplish the task. This shows that a child's behavior can be controlled by the adult, which is in accordance with Vygotsky's (1962) basic conjecture. At the same time, Vygotsky stressed the importance of a child's own utterances in formulating a plan of the ongoing action. In this respect, he opposed Piaget's (1970) idea of "egocentric speech." Contrary to the famous Swiss psychologist, he believed that the utterances produced by a child during play are an important step in his or her social development and do not reflect a lack of contact with his or her surroundings.

4. The final stage in establishing the regulatory role of verbal instructions takes place between 4½ and 5 years of age, when the meaning of words prevails over their impulsive aspect. This allows inhibition of unnecessary movements in accordance with the verbal command. Moreover, "egocentric speech" disappears at about this age, and a child does not need to utter the self-instructions anymore. Luria also pointed out that such development coincides with the first stage of maturational sprout of the frontal lobes.

Luria's theory has received some criticism, says Kaczmarek, particularly his ideas of the dominance of the verbal system over motor behavior, and its developmental aspects (Bloor, 1977). Certainly, it is disputable whether language is responsible for the specificity of the human brain action or if the specific organization of the nervous system is responsible for language. As Bloor says, ‘If language does indeed regulate, the question can be asked: what regulates language?’ (p. 80). At the same time, he writes that Luria’s theory is concerned mainly with the relations and dispositions of functional various subsystems of the human brain and not with their origin. Therefore, it is perfectly legitimate to hold that the verbal system is the best information processor within the brain, which makes it capable of controlling other systems' action.”
Noam Chomsky’s contribution to psycholinguistics

Noam Chomsky’s contribution to psycholinguistics is expressed mainly in his philosophy of mind and nature, according to which “Human conceptual and linguistic creativity involves several mental faculties and entails the existence of some kind of mental organization. It depends on perceptual-articulatory systems and conceptual-intentional systems, of course, but on many others too, such as vision. According to Chomsky, the mind comprises an extensive cluster of innate ‘modules,’ one of which is language. Each module operates automatically, independently of individual control, on the basis of a distinct, domain-specific set of rules that take determinate inputs from some modules and yield determinate outputs for others. In earlier work, these operations were called ‘derivations’; more recently they have been called ‘computations.’ The various modules interact in complex ways to yield perception, thought, and a large number of other cognitive products … The language module seems to play a role in coordinating the products of other modules. The generative—specifically, recursive—properties of language enable humans to combine arbitrary concepts together in indefinitely many ways, thereby making the range of human thought virtually unlimited. When concepts are paired with sounds in lexical items (words), humans can say virtually anything and cooperate and make plans with each other. The fact that the language faculty yields this kind of flexibility suggests that the emergence of language in human evolutionary history coincided with the appearance of other cognitive capacities based on recursion, including quantification.” Britannica (2017)

The psychological aspect of language acquisition, like its mechanical aspect, manifests itself primarily between 0 – 6 years. It is important to point out that humans are born with language instinct, which is a predisposition that children have to acquire any language when exposed to it between 0 – 10, which itself is defined as the critical period hypothesis. In child language acquisition, the critical period is the hypothesis that there is a particular time span during which a first language can be most easily acquired. For example, children learn to pick up vocabularies at the rate of one per exposure. That means they only have to hear a word just once for them to remember it even after a long time, whereas adults need a lot of repetitions when learning a language before they can remember the words. The notion of a critical period is well supported in several areas of child development (e.g. with reference to the development of the mechanism of...
swallowing), and was felt to be also relevant to the emergence of language. Why is that period critical? According to David Crystal, it was argued that the critical period for language ends at puberty, because by this time the brain has become specialized in its functions, and no longer has the adaptability found at earlier stages of biological development. The hypothesis has proved to be extremely difficult to test, and remains controversial. The study of language-deprived children (reared in the wild or by animals – ‘feral children’ – or kept isolated from society – ‘attic children’) provides some support; but studies of adult language learning indicate that the brain is more plastic in adulthood than was once believed and that its language functions are more widely distributed. Adults moreover have certain cognitive abilities which facilitate language acquisition, such as increased motivation and greater metalinguistic awareness. Another element worth considering when analyzing the critical period is the language acquisition device theory. The language acquisition device is a hypothetical tool in the brain that helps children quickly learn and understand language. Noam Chomsky theorized the LAD to account for the rapid speed at which children seem to learn language and its rules. LAD later evolved into Chomsky’s greater theory of universal grammar, which is the name for the theory of the genetic component of language faculty. Neurolinguistics plays a major role in the understanding of cognitivism in language acquisition. Neurolinguistics focuses on the areas of the brain which seem to be most closely implicated in speaking, listening, reading, writing and signing, mainly located at or around the Sylvian and Rolandic fissures; also called the language centers. For example, an area in the lower back part of the frontal lobe is primarily involved in the encoding of speech (Broca’s area); an area in the upper back part of the temporal lobe, extending upwards into the parietal lobe, is important in the comprehension of speech (Wernicke’s area). Other areas are involved in speech perception, visual perception and the motor control of speaking, writing and signing. Damages suffered by these areas can lead to language loss, which may be permanent or temporary, and varies in the severity with which it affects different aspects of language structure.

Cognitive factors such as intelligence, memory, and attention have a primary role in language learning. Words may be retained and made available for use by the brain during language production and comprehension. This is called lexical storage and it forms part of a theory of language processing. In bilingualism, for example, different views exist over whether the corresponding words in each language (e.g. English dog and French chien) are stored as single or dual mental representations. In their study – Bilingual infants control their languages as they listen – published in Proceedings of the National Academy of Sciences of the United States of America (PNAS), Krista Byers-Heinlein, Elizabeth Morin-Lessard, and Casey Lew-Williams found that infants can differentiate between words in different languages. According to the authors, “Infants growing up in bilingual homes learn two languages simultaneously without apparent confusion or
delay. However, the mechanisms that support this remarkable achievement remain unclear. Here, we demonstrate that infants use language-control mechanisms to preferentially activate the currently heard language during listening. In a naturalistic eye-tracking procedure, bilingual infants were more accurate at recognizing objects labeled in same-language sentences (“Find the dog!”) than in switched-language sentences (“Find the chien!”). Measurements of infants’ pupil size over time indicated that this resulted from increased cognitive load during language switches. However, language switches did not always engender processing difficulties: the switch cost was reduced or eliminated when the switch was from the nondominant to the dominant language, and when it crossed a sentence boundary.”

- **Narrative Ability Test (NAT) or Test of Narrative Language (TNL)**

By and large, the test of narrative languages is “used to identify language impairments, measure the ability to answer literal and inferential comprehension questions, measure how well children use language in narrative discourse, and serve as a natural complement to other standardized tests. A narrative is an oral sequence of real or imaginary events and is often considered a primary means by which people construct and communicate their actions.” Bruner (1986). Most studies investigate children’s productive narrative ability, either through story generation or story retelling based on picture sequences. Story generation is assumed to be more difficult than story retelling as there is no benefit of a prior presented script, thus reflecting the narrator’s internalized narrative organization. Retelling gives the advantage of a more structured elicitation, allowing for the experimenter’s control over aspects such as length and complexity (Liles, 1993). McFadden and Gillam (1996) stated that difficulties for language impaired children have been observed in the linguistic structures of personal and story narratives, as well as in measures of cognitive structure, such as recalling information, length of story, and number and complexity of episodes. Research has documented that addressing narrative abilities in intervention results in improved narrative skills and reading comprehension. There are several different types of narratives which can be assessed: personal, fictional, expository, and persuasive. Out of these narrative types, accounts of personal experience, as well as the retelling of fictional stories, are used most frequently by researchers to assess younger children’s narrative competence (whereas expository and persuasive narratives are more useful for adolescent assessment purposes). The following are among the reasons why these are preferred: Personal narratives constitute a large section of functional discourse commonly found in the spontaneous conversation of typically developing preschool and school-aged children. They are sensitive to narrative competence (Bliss & McCabe 2012). They require the speaker to organize an account or a recount of past experiences. They provide effective ways to tax the system due to unplanned discourse (Hadley, 1998; Hughes, 2001). Although they are natural to tell, they also require that the storyteller makes the story interesting to listeners so
not to lose their attention (Hughes, 2001). Finally, they are important for connecting with family and friends as well as for literacy acquisition (Bliss & McCabe 2012). Fictional narratives tap into the child’s knowledge of organizational framework and are sensitive to language impairment (McCabe & Rosenthal-Rollins, 1994). They have been routinely identified as one of the single best predictors of future academic success (Bishop & Edmundson, 1987; Feegans & Appelbaum 1986). Poor discourse and narrative abilities place children at risk for learning and literacy-related difficulties including reading problems (McCabe & Rosenthal-Rollins, 1994). Narrative analyses help to distinguish children with language impairment from their typically developing peers (Allen et al 2012). Furthermore, language produced during story retelling is positively related to bilingual reading achievement (Miller et al, 2006). Narrative retelling bridges the gap between oral and written language and is important for appropriate reading and writing development (Snow et al, 1998). It provides insights into child’s verbal expression since it taps into multiple language features and organizational abilities simultaneously (Hoffman, 2009; McCabe & Bliss, 2003; Ukrainetz, 2006). Below is a review of a Test of narrative language provided by the University of Alberta:

<table>
<thead>
<tr>
<th>Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, &amp; Lovell</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Test:</strong> The Test of Narrative Language</td>
</tr>
<tr>
<td><strong>Author(s):</strong> Ronald A. Gillam and Nils A. Pearson</td>
</tr>
<tr>
<td><strong>Publisher/Year:</strong> Pro-Ed 2004</td>
</tr>
<tr>
<td><strong>Forms:</strong> one</td>
</tr>
<tr>
<td><strong>Age Range:</strong> 5 years, 0 months, to 11 years, 11 months</td>
</tr>
</tbody>
</table>

**Norming Sample**

Norming occurred from Fall 2001 to Spring and Fall of 2002. The sample was constructed by the Pro-Ed customer base (i.e., clinicians who have purchased language tests in TNL targeted age range).

**Total Number:** 1 059 children

**Number and Age:** stratified by age

**Location:** 20 states in four geographic regions. Sample based on school age data from *Statistical Abstract of the United States, 2001*

**Demographics:** gender, race/ethnicity (based on total population data)
Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, & Lovell

Rural/Urban: not specified

SES: family income (based on Sourcebook America, 2000)

Other (Please Specify): Exceptionality⁷ was reported: learning disorder, articulation disorder, emotional disturbance, hearing impaired, language disorder, attention-deficit/hyperactivity disorder, gifted and talented, and other disability. Interestingly, though a sample percentage was given, percentage of population for language disorder, ADD/ADHD, gifted and talented, and multiple disability were listed as “NA-not appropriate” on Table 4.1 Demographic characteristics of the normative sample (Gillam & Pearson, 2004, p. 38).

Comment: The percentage of the sample closely approximated the percentage of U.S. population. On that count, the sample gives confidence to users regarding representativeness. However, I think that the number of children in the 5 years age group was small n=83 (8% of sample), almost less than half of the numbers in the other age groups: 6 yr n=156, 7 yr. n=182, 8 yr n=192, 9 yr n=145, 10 yr n=167, and 11 yr n=134. Overall, these seem to be small numbers. How does this affect scores, etc, later?

Comment: The Buros reviewers both point to overrepresentation of upper income levels and lower number of 5 yr olds. One reviewer further states, “upper income groups ...problematic because of the language abilities of children from more advantaged backgrounds” (Baxter & Van Lingen, 2005, p. 1041).

Summary Prepared By: Eleanor Stewart 10 and 13 Jul 07

Test Description/Overview

The TNL is intended to be used to measure children’s ability to understand and tell stories. As a standardized measure of narrative language abilities, the TNL addresses “textual memory, textual cohesion, textual organization, and the ability to formulate multiple sentences around a common theme” (Gillam & Pearson, 2004, p. 8). Table 1.2 offers studies that demonstrate the difficulties with narrative dimensions among children with language disorders.

The TNL is unique in its approach to sampling children’s spoken language. Language sampling is well-developed for younger preschool age children, with considerable work led by Jon Miller and David Yoder at The University of Wisconsin (see, for example, Miller, 1981; Miller & Chapman, 1993). For children of the age targeted by the TNL, there were few, if any, standardized procedures for analyzing spoken language. Additionally, the authors have developed a scoring system that is easy to use and likely

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⁷ The term ‘exceptionality’ is used by the Department of Education and Early Childhood Development to identify patterns of strengths and needs common to groups of students. In Newfoundland and Labrador a student can only access special education service if he or she has an exceptionality. (www.ed.gov.nl.ca/edu/k12/studentsupportservices/exceptionalities.html). (Note added by Fritz Dufour for clarification)
time efficient. Theirs is an important contribution to the assessment of language skills in school age children.

Comment: Table 1.2 is helpful for the clinician thinking about how the child is performing on narrative tasks. For example, one study points to difficulties with drawing inferences (Gillam & Pearson, 2004).

Comment: I did not find information about how the test items or tasks were initially chosen though that is perhaps assumed from the Introduction where the authors provide an overview of narrative development as well as description of dimensions of narrative discourse. Later in Chapter 4 on “Normative Information”, the authors report on item discrimination and item difficulty analyses. They state that 26 items were dropped as a result.

Comment from The Buros reviewer states, “the relationship between the definitions and constructs presented and the actual scores resulting from the TNL are not always clear and deserve greater elucidation” (Baxter & Van Lingen, 2005, p. 1044).

The authors list four uses:
1. “to identify children who have language impairments” when “combined with other measures”,
2. “to determine whether there is a discrepancy between narrative comprehension and oral narrative production”,
3. “to document progress”, and
4. “to measure narrative language in research studies” (Gillam & Pearson, 2004, pp. 8-9).

The test kit consists of the examiner’s manual, a picture book, and test record forms. The picture book contains coloured line drawings for tasks 3-6. The front page of the 8-page record form contains identifying information, a summary of scores and a section for observations. Inside the form, beginning on page 2, each task is laid out in format (no picture cues or sequenced pictures), with directions, and response targets. The directions for instructing the child appear in paragraph form and are printed in blue to distinguish them from surrounding information. The kit is stored in a cardboard box. An audiotape recorder is required to tape the child’s response.

Narration tasks include (1) Oral retell (McDonald’s restaurant story), (2) Picture sequence story formulation following adult model (Late for School), and (3) Story formulation from single picture following adult model (Aliens).

Purpose of Test: to measure narrative comprehension and oral narrative production

Areas Tested: Narrative comprehension and Oral Narration

• **Oral Language**  Vocabulary: information such as describes objects  **Grammar** uses same tense throughout story and uses grammatically correct sentences  **Narratives** setting, characters, story elements, and story
Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, & Lovell

- **Listening narrative comprehension**: answers questions about story

**Who can Administer:** Examiners should have basic testing knowledge and assessment training and coursework.

**Administration Time:** The authors state that completion of the six tasks has no time limits but that administration would take between 15 and 25 minutes. Scoring takes an additional 20 minutes for examiners familiar with the procedures.

**Test Administration (General and Subtests):**

Examiners are encouraged to familiarize themselves with the test and to practice administration and scoring the examples provided in Appendix E (Gillam & Pearson, 2004) several times.

The test should be administered in a comfortable and quiet location. The entire test administration should be audiotaped. The comprehension items should be scored as they are administered while the remaining tasks are scored from the tape. The authors state that examiners should “listen to each story at least three times while making scoring judgments.” (Gillam & Pearson, 2004, p.12) so that accuracy in transcription is achieved for scoring.

The test consists of six subtests, in two areas addressing aspects of narrative comprehension and oral narration:

The first two subtests involve the examiner’s telling of a story without picture cues. By proceeding in this way, the authors reduce the possibility of a bias against children who may not have had this type of experience. The examiner asks the child a series of questions based on the story or asks the child to retell the story just read aloud by the examiner (“Now tell the story back to me”).

The second and subsequent subtests involve the presentation of pictures to assess narrative comprehension and to elicit oral narrative responses. In oral narrative subtests, the child is directed to retell a story just heard, tell a story sequence based on a picture sequence, or generate a story with a picture with only one probe question: How does this story start? Narrative comprehension requires that the child respond to examiner questions.

**Test Interpretation:**

Scoring for each subtest is described in detail in the manual beginning on page12. Throughout this section, examples of responses are provided. Interpretation based on raw scores is found in Chapter 3, “Interpreting the Results” (Gillam & Pearson, 2004, p. 27). This chapter explains the types of scores, what the scores measure, and their meaning.

*Comment: The manual is easy to read and clearly defines the scores.*
The chapter concludes with a section titled, “Cautions in Interpreting Test Results” (Gillam & Pearson, 2004, p. 34). Here, the authors outline three cautions in interpreting test results: “test reliability is a cause for concern, tests do not diagnose, and test results don’t necessarily translate directly into clinical programs”.

Comment: Though these are common cautions, I think this review is helpful especially for new clinicians (or older ones who have forgotten). These cautions are also useful in communicating to others when reporting a child’s test results. I would encourage clinicians to be prepared using these cautions when having to explain any test limitations they feel are appropriate for a particular child.

Comment: The Buros reviewer noted one small scoring error in which the examiner asks, “Where did they eat?” when in fact the family in the story did not actually eat their meal. However, a response correctly indicating this was marked incorrect. The reviewer suggests better wording is needed. The reviewer stated, “One item on the TNL appears problematic. On the McDonald's story, question 6 asks, 'Where did they eat?' In the story, the family is not described as eating. It ends with the family having ordered their food and the mother discovering she has left her purse at home. A response indicating that the story did not tell if the family ate at McDonald's or not is coded as incorrect. Better wording of the question may be to ask where the family went to eat” (Baxter & Van Lingen, 2005).

Standardization:

- **Age equivalent scores**
- **Percentiles**
- **Standard scores** for Narrative Comprehension (NC) and Oral Narration (ON) subtests including qualitative descriptors: very poor to very superior according to standard score range (see Table 3.1, Gillam & Pearson, 2004, p. 30)

- **Other**: Narrative Language Ability Index (NLAI) is a composite index standard score (sum of the two subtest NC and ON scores) with mean of 100 and SD of +/-15.

The development of the scores is described in Chapter 4, “Normative Information”. The authors state that a normalized distribution of raw scores was used to calculate the three standard scores (i.e., subtest standard scores, X=10+/−3 and composite score, the NLAI, X=100+/−15). Roid’s continuous norming procedure was used to develop the standard scores (see the test manual for more details about the method which uses polynomial regression, p.40). The distribution was chosen to align with tests familiar to clinicians such as the TOLD-P3, TOLD-3, TACL-3, WISC-3, WJ-III, and “many other popular tests of language and aptitude” (Gillam & Pearson, 2004, p. 40). Regarding percentile ranks, which the authors describe as “convenient and popular” (p. 41), they outline the procedure taken but also point readers to several articles that discuss limitations of percentiles, including the classic 1984 article by McCauley and Swisher.

The authors take care in describing how to use and interpret the various types of scores (Chapter 3 “Interpreting the TNL Results” Gillam & Pearson, 2004, p.29).
Reliability:

**Internal consistency of items:** The authors report that “coefficient alphas were calculated at seven intervals using data from the entire normative sample” (Gillam & Pearson, 2004, p. 43). Using Guilford’s formula, coefficient alphas calculated for NLAI were averaged using z-transformation techniques. Averaged numbers are presented in Tables 5.1 and 5.2 (p. 44). Results:

- NC average .76
- ON average .87
- NLAI average .88

**Standard Errors of Measurement (SEMs)**

- NC average .2
- ON average .1
- NLAI average .5

Authors also presented data for selected subgroups of the standardization sample which they state represented “a broad spectrum of populations” (Gillam & Pearson, 2004, p. 44). Alphas ranged from .78 (female subgroup, NC) to .94 (language delayed, NLA).

**Test-retest:** 27 children (ages 5 to 10 years, in Austin, TX) who were “primarily” children with language disorders receiving intervention (n=20 LD, n=6 typical developing, n=1 learning disabled) were retested. Sample characteristics were: 62% boys, 44% Euro-Americans, 30% African American, and 12% Hispanic. The interval was “approximately 2 weeks” (Gillam & Pearson, 2004). The authors calculated mean standard scores and SDs for time 1 and time 2 and correlations. Results corrected (uncorrected) reliability coefficients were reported:

- \( r = .85 \) (.90)
- \( r = .82 \) (.80)
- \( r = .81 \) (.88)

The authors state that “resulting coefficients are large enough to support the idea that TNL scores contain minimal time-sampling error” (Gillam & Pearson, 2004, p. 45).

*Comment from The Buros reviewer states,* “Only the uncorrected Narrative Comprehension subtest score meets the .90 criteria for use of tests to make individual educational decisions about children (Salvia & Ysseldyke, 2004). Test-retest reliabilities were not separately calculated for different ages. Thus, the test-retest data are based on a small, non-representative group and are not strong enough for clinical decision-making” (Baxter & Van Lingen, 2005, p. 1041).
### Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, & Lovell

**Inter-rater:** Upfront (the first statement in this section) the authors state, “Interscorer reliability for tests such as the TNL is a serious concern because a certain amount of subjectivity is involved in scoring a child’s responses despite clear scoring criteria” (Gillam & Pearson, 2004, p. 45).

Scorer reliability was investigated in two ways:

1. **Intra-rater** between audiotape scoring and scoring of written transcripts of ON tasks was determined. Two trained examiners transcribed tapes. Then two raters, trained by the authors, scored 75 stories (42 children, ages 5 to 7 years, and 33 children ages 9 to 11 years), with a two-week interval. Percent agreement was calculated. Results showed percent agreement for McDonalds story to be 98%, Late for School to be 93%, and Aliens to be 91%.

2. **Inter-rater** reliability was demonstrated by having two raters, one trained by authors and the other unfamiliar with the TNL independently rate audiotapes of 40 children selected from the norming sample. These children were: 80% European American, 10% African American, 10% Hispanic, 10% Other; and n=12 normally achieving, n=16 language disordered, n=6 learning disabled, and n=1 Asberger’s syndrome. Percentage agreement was calculated for each subtest. Results showed percent agreement at 94% for NC and 90% for ON. The authors also used Cohen’s kappa for each TNL item. Results for NC were .03-.1.00, x=.77. ON results were .04 to 1.0 with x=.71. Referring to guidelines by Fleiss and by Cicchetti and Sparrow, the authors state, “According to these guidelines the mean kappas are excellent for the Narration Comprehension subtest and good for the Oral Narration subtest” (Gillam & Pearson, 2004, p. 47).

*Comment: Referring back to the Renfrew Bus Story, I remember the low inter-rater reliability, which Renfrew authors cautioned against.*

### Validity:

**Content:** The authors describe their rationale for the format of the test and for the selection of items using research evidence to support their choices (Gillam & Pearson, 2004, pp. 50-53).

*Comment: I found this section informative and convincing. It was a quick review of an area that I am less familiar with.*

Also in this section, the authors turn to “quantitative evidence for the TNL’s content-description validity” (Gillam & Pearson, 2004, p. 53). Here, they describe item discrimination and item difficulty statistics. As a result of these analyses, 26 items were deleted from the experimental version. Further, they report analyses for the normative sample. In table format, they report the “discrimination coefficients (corrected for part-whole effect) and item difficulties. The median discriminating powers and percentages of difficulty reported at the bottom of each table demonstrate clearly that the test items satisfy the requirements previously described and provide evidence of content-description validity” (p. 55).

*Comment: Although I am less clear about these analyses, the results look convincing.*

**Criterion Prediction Validity:** In the first of two studies reported, scores for 47 children ages 5 to 10 years in 3 states were compared to the Spoken Language Quotient (SLQ) of TOLD-P3. The authors found corrected and uncorrected coefficients < .70 indicating a strong relationship between the two tests as measures of language ability. The second study examined the relationship between the TNL and
Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, & Lovell

language samples analyses. A total of 105 (15 at each age level) transcripts were coded for conversation units and transcribed using Systematic Analysis of Language Transcripts (SALT). SALT results were presented in terms of total number of words, number of different words, mean length of utterance, MLU in morphemes, total number of clauses, and number of story grammar propositions. Using raw scores from TNL and the NLAI correlated with SALT results, the authors found coefficients in moderate to large range (.45 for total number words NC to .79 - very large for number of different words ON). The authors state, “The magnitude of the coefficients supports the criterion-prediction validity of the test. Further, these correlations indicate that children’s TNL scores are related to the types of language measure that are commonly applied to narrative samples” (Gillam & Pearson, 2004, p. 58).

**Construct Identification Validity:** Three studies reporting construct identification in relation to age differentiation, group differentiation, and factor analysis were reported. Age differentiation was demonstrated with the children’s performance means increasing with increasing age. Correlation coefficients were calculated to be .50 and .57 for NC and ON respectively (statistically significant at $p < .0001$ level). Groups differentiation was reported by mean standard scores for groups in a sample by race/ethnicity and exceptionality. Results showed no differences between “mainstream and minority” scores while differences were evidenced for disability groups were as expected. Factor analysis supports evidence of “general narrative ability”.

*Comment:* However, the Buros reviewer points out that further evidence is needed to examine the relationship between Narrative Comprehension and Oral Narrative (Baxter & Van Lingen, 2005).

**Differential Item Functioning:** Refer also to section above on Content Validity. The authors also conducted an analysis to address item bias. Using a logistic regression procedure on the entire normative sample, 290 comparisons were made with 5 found to be statistically significant at the .001 level (3 regarded “negligible magnitude”, one “moderate”, and one was “large”). The authors decided to keep these items in the test, stating, “both these items had good discrimination and difficulty characteristics…Further, total scores were not affected significantly by removing these items” (Gillam & Pearson, 2004, p.56), therefore, gender, race, and ethnic bias were ruled out by the authors.

**Other:** Sensitivity, specificity, and positive prediction exceed .85 thus providing evidence for the valid use of TNL in the identification of children with language disorders based on positive prediction outcome analyses (Gillam & Pearson, 2004, p. 62). The authors detail studies of 76 children with language impairment and 76 typical children in matched sample. *Comment:* This section has a very good explanation of sensitivity and specificity. As well, the authors note that there is some controversy about rigor.

*Comment from the Buros reviewer:* The authors also claim that comparisons of scores for European Americans, African Americans, and Hispanic Americans on the subtests and NLAI support the TNL’s construct validity. However, inspection of the means suggests that the subtests and composite may not measure the same thing in the three groups. The subtest standard scores vary between 9 and 10 for the two latter groups whereas that of the European Americans is 10. On the NLAI, the groups’ average standard scores are 102, 95, and 94, suggesting that the scores for African American and Hispanic
Review of the Test of Narrative Language (TNL) – University of Alberta, Hayward, Stewart, Phillips, Norris, & Lovell

American children are 1/3 of a standard deviation away from the mean and 7 and 8 points, respectively, below the European American children. This suggests that these skills are influenced by culture (e.g., Berman, 2001), and the TNL is assessing the differences. Exploratory factor analysis identified the two subtest factors. Confirmatory factor analysis confirmed the development of the NLAI from the tasks (Baxter & Van Lingen, 2005, p. 1042).

Criterion-prediction validity included comparing the TNL and the Spoken Language Quotient of the Test of Language Development-Primary: Third Edition (TOLD-P: 3) for 47 language-impaired children between the ages of 5 and 10 years. Their scores were similar; however, the TOLD-P: 3 is normed only for children between the ages of 4 years, 0 months and 8 years, 11 months. TNL scores and language samples collected from TNL audio recordings for a sample of 105 children with and without disabilities were similar but it is very possible that the TNL language samples may not be as rich as samples taken in different situations. Evidence of construct validity was demonstrated by increased performance on the TNL with age, differentiation between children with and without language disabilities, and the ability of the TNL to accurately identify children with and without language disabilities.

Summary/Conclusions/Observations:

In the Acknowledgements, the authors invite users to submit their comments and suggestions for improving the TNL.

In a section, “Follow-Up Measures”, the authors make an important point that story telling is culturally specific (Gillam & Pearson, 2004, p.33). In this way, examiners should be alerted to carefully and cautiously interpret the performance of children who are culturally different. Additionally, I think that we need to be aware of children who come from “low print-low talk” environments who may at first glance appear to be from so-called mainstream homes.

As stated earlier (in Test Description), these authors have made an important contribution with the development of this test and its accompanying procedures for language sample analysis for school age children.

Throughout the manual the authors offer their concerns about tests and testing. I agree with what they say, but does it need to be in a test manual? In some ways, it seems odd to expound on test limitations when you are trying to promote the value of your own test. On the other hand, perhaps this is a forum for examiner education and for many clinicians, information such as this contained in a manual that they will use is probably the only time they will be exposed to these concerns.

Clinical/Diagnostic Usefulness:

The manual is clearly organized and easy to read, making it accessible to both novice and experienced examiners. While I appreciate the thoroughness with which the authors outline their test development, I am left feeling that this test was rushed to publication. I think that the norming sample, while adequate
just feels too small, especially as I work with children at the lower age ranges (5 years) as do many other speech-language pathologists.

I think that it is important to remember that TNL only assesses narrative skills and is not a definitive measure of language ability as tempting as it may be to just administer this one test due to its strong psychometric evidence. I would be afraid that the TNL would be used alone to make candidacy decisions rather than as one test in a battery of tests, so clinicians and others using this test should be reminded that it addresses narrative language abilities. A different test, such as the CELF-4\(^8\) should be chosen for that purpose. When time is short, clinicians need to be strategic.

While the importance of narrative abilities is clear in my mind as a speech-language pathologist, I think that it would have been beneficial for the authors to have shown links to curriculum so that it is easier for clinicians and teachers to proceed in using the TNL information in a valuable way. The importance of integrative language skills needs to be highlighted as related to classroom tasks. Though this may be clear to some clinicians, the extra support found in print in a manual such as this is appreciated. For example, see CELF-4 manual (bear in mind that CELF-4 developers specifically had curriculum in mind as they updated).

I would choose the TNL over the Renfrew Bus Story to identify children with language disorders due to the psychometrics. However, I understand that the Bus Story is used more frequently by clinicians as it is older and more identifiable.

**References:** See bibliography (at the end)

The reviewer of the above test does express some reserve about both the process and the results, but as far as the role of psychology in language acquisition in children, this test is definitely a testimony. It helps us understand the relationship between the mechanical aspect and the psychological aspect of language acquisition. Now, I would like to take it further by pointing out that cognitivism does not manifest itself in the language acquisition process only during childhood. It is also present in adults when learning a foreign language or in bilingual adult people. I would like to point out that according to the same study, “Adults showed the same patterns of performance as infants, even though target words were simple and highly familiar. Our results provide striking evidence from infancy to adulthood that bilinguals monitor their languages for efficient comprehension. Everyday practice controlling two languages during listening is likely to explain previously observed bilingual cognitive advantages across the lifespan.” This can be explained by the concept of *interference* or *code-switching*, a term used in sociolinguistics and foreign-language learning to refer to the errors.

\(^8\) Clinical Evaluation of Language Fundamentals - 4

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*Exploring the Possibilities for the Emergence of a Single and Global Native Language*, by Fritz Dufour, Linguist, MBA, DESS
a speaker introduces into one language as a result of contact with another language; also called negative transfer. The most common source of error is in the process of learning a foreign language, where the native tongue interferes; but interference may occur in other contact situations (as in multilingualism). Finally, linguistic cognitivism is explained by what is called interlanguage, which is not the same as interference or code-switching. Interlanguage is the linguistic system created by someone in the course of learning a foreign language, different from either his first language or the target language being acquired. It reflects the learner’s evolving system of rules, and results from a variety of processes, including the influence of the first language (‘transfer’), contrastive interference from the target language, and the overgeneralization of newly encountered rules.

All things considered, by the time a child is ten years old, he/she must have mastered both the mechanical and the psychological or cognitive aspects of language in the sense of speech. Also, he should be speaking his native language, well, like a native and be familiar with the following:
A ten-year old child is familiar with:

- Diphthong: two adjacent vowels in which each vowel is heard in the pronunciation for example ou in the word house.
- Graphemes: a printed letter symbol used to represent a speech sound. May be just one letter, such as b, d, f, p, s; or several letters, such as ch, sh, th, -ck, ea, -igh.
- Morphemes: smallest meaningful unit of language such as the word cat.
- Morphology: are the molecules of a language, the smallest separate units that create meaning.
- Onset and rimes: the consonants that come at the beginning of a word such as bl in the word blend.
- Orthography: correct spelling, a lifelong learning, but the ten-year old should be able to spell the words he learned in school.
- Phonemes: is the smallest unit of sound in a language that distinguish one word from another. a or oh, have only one phoneme. The word check has three phonemes (/ch/ /e/ /k/),
- Phonemic awareness: the ability to hear, identify, and manipulate the individual sounds-phonemes--in spoken words.
- Phonics: Using letters and the sounds of letters to determine the pronunciation of a word
- Phonological awareness: is a broad term that includes phonemic awareness. In addition to phonemes, phonological awareness activities can involve work with rhymes, words, syllables, and onsets and rimes.
- Phonology: the sounds of a language
- Pragmatics: in general, how language changes from one social situation to another. Casual and business talking, but, applied to a ten-year old, he should know what is ok to say at home, but not ok to say at school or when talking to strangers.
- Rimes: are the vowels and consonants at the end of a word for example end in the word blend.
- Semantics: is the way a word is defined
- Syllable: is a word part that contains a vowel or, in spoken language, a vowel sound (event: e-vent; newspaper: news-pa-per; very: ver-y).
- Synatex: the sentence structure or grammar
- Vowel digraph: two adjacent vowels that represent one speech sound like ee in the word feet or ea in the word meat.

Language use

Language use is defined as the meaning of our speech, what do we want to accomplish when we use a set of words instead of another; and this applies to every single spoken language today, as spoken words translate thoughts, emotions, and intent. The acquisition of spoken language and

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9 The 10-year old child may not know the meaning of such words, but he will have been exposed to them or use them through reading, writing, or speaking.
subsequently its use, is virtually similar (meaning irrespective of demographics, socioeconomics and ethnic differences) for every human, say between 0 – 18 years old. “A human baby produces its first real words at about eighteen months of age. By the age of two, it has become quite vocal and has a vocabulary of some fifty words. Over the next year it learns new words daily, and by the age of three it can use about 1,000 words. It is now stringing words together in short sentences of two or three words, calling your attention to objects, requesting this and that. Its command of grammar is already nearly as competent as an adult’s, though it will still make amusing yet plainly logical mistakes, saying ‘eated’ instead of ‘ate’, ‘mouses’ instead of ‘mice’. Then the floodgate opens. By the age of six, the average child has learned to use and understand around 13,000 words; by eighteen, it will have a working vocabulary of about 60,000 words. That means it has been learning an average of ten new words a day since its first birthday, the equivalent of a new word every 90 minutes of its waking life.” Dunbar (1996).

However, people’s use of language may vary from one individual to the next or from one community to the next, and this is important especially if we want to fit it into the materialization of a worldwide single spoken language. Language use involves many characteristics that make learning and mastering a foreign language (even one’s own native language) challenging. If the characteristics of language acquisition, in terms of speech, presents little variations among humans, the use of spoken languages to convey messages is as diverse as the people who speak them.

**Characteristics of language use at the geolinguistic level**

Geolinguistics, a branch of linguistics which studies the geographical distribution of languages throughout the world, with reference to their political, economic and cultural status, helps us understand such diversity. The following notions are examples of how language is used (obviously, once a native language has been mastered): dialect, sociolect, ethnolect, regiolect, idiolect, accent, and register. A dialect is a variant of a spoken language. It is an intermediate point between language A and language B. One of the main characteristics of a dialect is that there must be mutual intelligibility between the dialect and the main language, and they both must respond to a common entity, or else the dialect is a separate language in its own right. When a dialect is associated to a specific social class, it is called sociolect. In the case of an ethnic group, it is called ethnolect. For example, Ebonics or English spoken by some black people can be characterized as an ethnolect. A dialect that is spoken within a region is called regiolect. No two people talk exactly the same way, even when they speak the same language or have the same accent. The way a person express herself – whether she is speaking a native language or foreign language – is called idiolect, which is not to be confused with accent. While idiolect translates the thought process of a particular person, his choice of words and grammar, accent is the way he pronounces a language – be it his native language or a foreign language. Also, a person’s voiceprint is to be considered when
analyzing his idiolect. Voiceprint is a display of a person’s voice based upon a spectrographic or similar output. The analogy is with the term ‘fingerprint’, and the claim is voiceprint sometimes made that a person’s voice is as individual as fingerprints. Several legal cases have in fact used voiceprints as evidence of speaker identification. Lastly, a register, also called a style, is the way a language is used in a specific social setting. Examples include motherese or the way we talk to small children, formal or familiar language styles used, depending on whether we are in a formal setting or among friends or colleagues. This is to say that interpersonal relations are essential and influence the way language is used. This is true both at a micro level and a macro level. At a macro level, this leads to major differences in the way two or more categories of people use a specific language. The following analysis considers language types or families first in terms of phonology and morphology, then, in terms of their distribution across the world.

- **Phonetic and morphologic use of languages or linguistic typology**

Linguistic typology is the branch of linguistics that studies linguistic diversity. Generally, in terms of Phonetics and morphology, the differences between languages range from somewhat different and different to very different and extremely different. In some cases, these differences occur within the same language. For example, there is a marked difference between Northern and Southern French accents, Northeastern and Southern American accents, British received pronunciation and southern estuary English, etc. In the Japanese language, there is something called honorific, which is a term used to refer to syntactic or morphological distinctions used to express levels of politeness or respect, especially in relation to the compared social status of the participants. The notion should not be identified with formality: honorific forms may also appear in non-formal contexts. Some use is also made of the term with reference to functions other than the expression of respect, such as courtesy, politeness, etc. While the language acquisition process is virtually the same for all humans, how language is used has a broad spectrum. Languages’ particularities are as diverse as the world’s populations. Figures of style, idioms, proverbs and rhetoric are expressed differently and may have different meanings. For example:

- “*To have a bat in the belfry*” is an idiom that means to be silly and slightly crazy and behave in a confused way. The French say: “*have a spider on the ceiling*” instead.
- “*To have one’s feet on the ground*” is to be and remain in a calm, stable, sensible, and pragmatic state or condition; to not be subject to extreme emotional reactions or affected by exceptional changes in one's situation. In French, this idiom is expressed by “*Avoir la tête sur les épaules*” (literally: “To have one’s head on the shoulders”)
- In French, the word that designates a men’s shirt is feminine – *une chemise*, and the one that designates a women’s shirt is masculine – *un chemisier*. 
2. Mechanism and Dynamism of Language

Language Use (characteristics at the geolinguistic level)

- English speakers say: “I miss you”; French speakers say: “You miss me” (when translated word for word).

There is also something called inflection. It is a term used in morphology to refer to one of the two main categories or processes of word-formation (inflectional morphology), the other being derivation. These terms also apply to the two types of affix involved in word-formation. Inflectional affixes signal grammatical relationships, such as plural, past tense and possession, and do not change the grammatical class of the stems to which they are attached; that is, the words constitute a single paradigm, e.g. walk, walks, walked. A word is said to inflect for past tense, plural, etc. Languages such as the Romance languages – Spanish, Italian, French, Portuguese and Romanian – not only have more inflections than English, but also use genders. In terms of tone, it goes without saying that languages have different tones that must be used in a specific manner to convey one’s message. The French sounds “u” and “ou” for instance are both pronounced from the back of the throat. While Romance language speakers, English speakers, and speakers of other languages are more comfortable with the French sound “ou”, the sound “u” is very difficult for non-native speakers – even for other native Romance languages speakers – to pronounce properly.

On the other hand, some languages are strictly tone languages. A tone language is a language in which words can be distinguished purely by the pitch of the voice used on individual syllables. So, a word said with high pitch may have a different meaning than the same word said with a low pitch. English is a non-tonal language. Examples of tone languages include Swedish, Norwegian, Serbo-Croatian, Lithuanian, and some Asian languages like Mandarin Chinese, which is a tone language with four tones and one neutral tone. Most Chinese words are one syllable long. Therefore, meaning varies between the tones used for each word. In order to differentiate meaning, the same syllable can be pronounced with different tones. Mandarin's tones give it a very distinctive quality, but the tones can also be a source of miscommunication if not given due attention. Several other Asian languages are tone languages. Examples include Vietnamese, Thai, and Punjabi.

It is important to differentiate between pitch and tone. Japanese, for example, is not a tonal language, but rather a pitch language. “Pitch, in speech, is the relative highness or lowness of a tone as perceived by the ear, which depends on the number of vibrations per second produced by the vocal cords. Pitch is the main acoustic correlate of tone and intonation.” Pitch accent languages encode height – usually low versus high – onto syllables. For instance, the word hashi is made up of two syllables and whether you say the first syllable in a low pitch and the second in a high pitch, meaning LH, or the reverse, HL, the meaning of the word will change. It is the contrast in the height of the syllables that matters. Japanese pitch accent (高低アクセント kōtei akusento) is a feature of the Japanese language that distinguishes words in most Japanese dialects, though the nature and location of the accent for a given word may vary between dialects.
Specifically, the phonetic and morphological differences between language families are as follows:

The *Indo-European languages* share common characteristics in terms of phonetics, morphology, and syntax. Britannica tells us that “the chief reason for grouping the Indo-European languages together is that they share a number of items of basic vocabulary, including grammatical affixes, whose shapes in the different languages can be related to one another by stable phonetic rules. Especially important are the shared patterns of alternation of sounds. Thus, the agreement of Sanskrit ás-ti, Latin es-t, and Gothic is-t, all meaning ‘is,’ is greatly strengthened by the identical reduction of the root to s- in the plural in all three languages: Sanskrit s-ánti, Latin s-unt, Gothic s-ind ‘they are.’ Agreements in pure structure, totally divorced from phonetic substance, are, at best, of dubious value in proving membership in the Indo-European family […] As Proto-Indo-European was splitting into the dialects that were to become the first generation of daughter languages, different innovations spread over different territories […] Indo-Iranian, Balto-Slavic, Armenian, and Albanian agree in changing the palatal stops *k, *g, and *gh into spirants (s, š, th, etc.) or affricates—e.g., Sanskrit aśri- ‘sharp edge,’ Old Church Slavonic ostrŭ ‘sharp,’ Armenian aseln ‘needle,’ Albanian athētē ‘bitter’ beside Greek ákrop ‘tip,’ Latin acidus ‘biting,’ all from a basic element *H2eḱ- ‘sharp, pointed.’ (Spirants, also called fricatives, are sounds produced with audible friction as a result of the airstream passing through a narrow, but unstopped, passage in the mouth—e.g., English s, f, v. Affricates are sounds that begin as stops, with complete stoppage of the airstream, but are released as spirants, or fricatives—e.g., the ch in church, the j in jam.) The languages that change the palatal stops to spirants or affricates are known as “satēm” languages, from the Avestan word satom ‘hundred’ (Proto-Indo-European *kmtóm), which illustrates the change. The languages that preserve the palatal stops as k-like sounds are known as “centum” languages, from centum (/kentum/), the corresponding word in Latin. The satēm languages are not geographically separated from one another by any recorded languages that preserve the palatal sounds as stops; it is therefore inferred that the change to affricates (whence later spirants) occurred just once and spread over a cohesive dialect area of Proto-Indo-European.”

“Of the languages that share this change, however, Balto-Slavic shares with Germanic (including English) an m in certain case endings where other Indo-European languages, including Indo-Iranian, Armenian, and Albanian, have bh or a sound regularly developed from bh. Examples of the m ending include English, the-m and Old Church Slavonic tē-mū ‘to those ones’; the bh and related sounds (ph, v, b) are illustrated in the following: Sanskrit té-bhyas ‘to those ones,’ Armenian noro-vk’ ‘with new ones,’ Albanian male-ve ‘to mountains,’ Greek ókhes-phin ‘with chariots,’ Latin omni-bus ‘for all.’ Because Balto-Slavic and Germanic are neighbours, it is inferred that m replaced bh in these case endings just once in the parent language and that the area over which this innovation spread only partly overlapped the area that adopted affricated pronunciation of the palataIs […] This pattern is general for changes dating from the time the
parent language was breaking up into distinct languages. Each of the resulting languages shares some innovations with some of its neighbours, but only rarely do different innovations shared by two or more branches of Indo-European cover exactly the same territory […] Once the dialects had become differentiated enough to be distinct languages—certainly by 2500 bce in most cases—each largely went its own way, and agreements in developments since then are either due to borrowing across language boundaries (as in the notable convergences between Modern Greek, Albanian, Romanian, and the southernmost Slavic languages) or due to parallel but independent workings out of the same base material […] In phonology, the most striking changes have been loss or reduction in many languages of final or unaccented syllables, and loss in several languages of certain consonants between vowels, often followed by contraction of the resulting vowel sequence. Thus, words in modern Indo-European languages are often much shorter than their Proto-Indo-European ancestors—e.g., English ‘four,’ Armenian č’ork’, colloquial Persian čar ‘four’ from *kwetwóres; French vit (pronounced vi) ‘lives’ from *gwíH3weti; Russian dvesti ‘two hundred’ from *duwòyH1 k contemptóyH1.” (Warren Cowgill, Jay H. Jasanoff)

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The **North Amerindian languages** are as diverse in their systems of pronunciation as they are in other ways. For example, the languages of the Northwest Coast linguistic area are unusually rich in terms of the number of contrasting sounds (phonemes). Tlingit has more than 50 phonemes (47 consonants and 8 vowels); by contrast, Karuk has only 23. English, in comparison, has about 35 (of which about 24 are consonants) … The consonants that are found in many North American Indian languages involve several phonetic contrasts generally not found in European languages. The Native American languages use the same phonetic mechanisms as other languages, but many of the languages also employ other phonetic traits as well. The glottal stop, an interruption of breath produced by closing the vocal cords (such as the sound in the middle of English oh-oh!), is a common consonant. Glottalized consonants are fairly common in western North America, produced not by air from the lungs as are all English speech sounds but rather produced when the glottis is closed and raised so that the air trapped above the vocal cords is ejected when the closure in the mouth for that consonant is released. This is represented with an apostrophe; it differentiates, for example, Hupa (Athabaskan) teew ‘underwater’ from t’eew ‘raw.’ … The number of
consonantal contrasts is also often distinguished by a larger number of tongue positions (places of articulation) than is found in most European languages. For example, many of the languages distinguish two types of sounds made with the back of the tongue—a velar k, much like an English k, and a uvular q, produced farther back in the mouth. Labialized sounds, sounds with simultaneous lip-rounding, are also common. Thus, for example, Tlingit has 21 back phonemes (velar or uvular) alone: velar k, g, uvular q, G, glottalized velar and uvular k’, q’, labialized velars and uvulars gw, kw, kw’, Gw, qw, qw’, and corresponding fricatives (made by impeded airflow at some point in the mouth), such as s, z, f, v, and so on, with velar x and γ, with uvular χ, glottalized x’, χ’, and labialized xw, χw, xw’, χw’. In comparison, English has only two sounds, k and g, made in this same general area of the mouth ... North American Indian languages, especially in the West, often have different kinds of lateral (l-like) sounds (where the airstream escapes around the sides of the tongue). Alongside the common lateral l, such as the l in English, many of these languages also have a voiceless counterpart (like a whispered l or like blowing air around the sides of the tongue). Some have lateral affricates, like t and a voiceless l pronounced together, and some also add a glottalized lateral affricate. Navajo, for example, has a total of five lateral sounds that are distinguished from one another ... In some American Indian languages, contrastive stress is significant in distinguishing words with different meanings (as in the case of English a convert versus to convert). In many others, the stress is fixed on a particular syllable of the word; e.g., in Tubatulabal (Uto-Aztecan family) the final syllable of words bears the stress. In others, tone (pitch differences) distinguishes words, as it does in Chinese; for example, in Navajo, bíní’ means ‘his nostril,’ bini’ ‘his face,’ and bini’ ‘his waist’. (High and low pitches are indicated with the acute and grave accents, respectively.) (William O. Bright, Lyle Campbell)

As to the Arabic language, “it comprises 28 letters which are also used -with slight changes- in other languages such as Urdu, Persian, and originally Swahili and Turkish. Actually, Modern Standard Arabic belongs to the Semitic language family and is the definitive form of written Arabic. Modern Standard Arabic provides a universal form of the language that can be easily understood despite the fact that it is more than one and a half thousand years old. The rise of this language is inextricably intertwined with the rise of Islam as a major world religion; some practices cannot be done without mastering the Arabic language as it is the language of the Quran. The Arabic language has many unique specificities that differentiate it from all the spoken languages worldwide. Among these differences: 1) Parsing, which is a feature of this language, which includes all the terms like the doer, the verb, prepositions, etc… And despite the fact that parsing is present in some other languages such as Hindi, Hebrew, Ethiopian, Germanic… it is rather a partial parsing. For instance, a word like (علم) whose racine root includes the letters “A”, “L” and “M” can be read in seven different ways, each having a distinct meaning; “alima”, “olina”, “allama”, “ollima”, “alimon”, “eelmon”and “olim”. 2) Phonetic distinction. Modern Standard Arabic has the widest articulatory ladder among all languages. In other words, all of the articulatory organs participate in the creation of sounds from the lips to the glottis. Unlike other
languages -that may contain more letters- Arabic sounds are balanced and distinct from each other. That is why there are not many allophones to the same phoneme, but rather each phoneme is distinct and has its own particularities which creates harmony in the Arabic speech. 3) Calligraphy. The hand-writing of the Arabic letters is an art in itself. Letters in Arabic are so flexible that they can cope with the aesthetic of each period. Thus, numerous styles were created using the Arabic script such as, the Kufic style, the Cursive style, the Maghrebian style and the Karawian style... These Arabesque motifs were not only used in books, but to decorate the walls and ceilings of mosques as well. 4) Colloquial Arab dialects. Arab colloquial dialects are generally only spoken. A colloquial language is used in daily conversation, but in a situation calling for greater formality, Modern Standard Arabic is usually used. Standard Arabic is more or less the same throughout the Arab World, while there are wide differences between the various colloquial dialects.” (Lexiophiles)

In terms of Semitic languages, their phonetic system “employed a set of six phonemic vowels, three short and three long: *a, *i, *u, *ā, *ī, *ū. In contrast to the simplicity of this vowel system, the consonantal inventory of proto-Semitic was quite extensive. In addition to employing the lips, the front of the tongue, the palate, and the nasal cavity, proto-Semitic made use of the larynx (the area of the throat in which the vocal cords are located), the pharynx (the upper throat near the root of the tongue), the uvula (the fleshy area at the extreme rear of the roof of the mouth), and the side of the tongue … Like many languages, the Semitic languages have consonants belonging to a ‘voiceless series’ (pronounced without vibration of the vocal cords, as in English p, t, k) and a ‘voiced series’ (the pronunciation of which is accompanied by a buzzing of the vocal cords, as in English b, d, g) … In addition, the Semitic languages employ a third series known as “emphatic.” The exact nature of emphasis in the Semitic protolanguage remains debated, because the attested languages have two distinct modes for producing these sounds. An example of the first mode occurs in Arabic, where the emphatics ṭ, ḍh (from proto-Semitic *ṭh), ṣ, ḍ (from proto-Semitic *ṣ́) are produced with the rear part of the tongue raised toward the roof of the mouth, giving the sounds a “darkened” effect. Likewise, in Classical Arabic the emphatic *k is realized as a q, a k-like sound produced farther back, in the uvular area.”

The Altaic languages, for their part, “differ from the neighbouring languages of East Asia in two important respects. They typically lack honorific language, and there is no significant difference between the speech of men and women. Furthermore, gender distinctions are absent; there is no grammatical gender, and so-called feminine endings are few. Nor are there distinct words for ‘he’ and ‘she.’ In terms of phonology, the phonological (sound) systems of the Altaic languages tend to be simple. Syllables are usually open, ending in a vowel, most often of the pattern consonant-vowel (CV). The clustering of consonants is unusual in Altaic languages, and relatively few consonants are used. The vowel system reconstructed for Proto-Altaic bears some similarity to the ‘cubic’ vowel system of Turkish, which is a symmetrical system of eight vowel phonemes defined by three phonological oppositions: back/nonback, high/nonhigh, and round (labial)/nonround
Mongolian and Manchu-Tungus merged /i/ and /uː/; the latter eliminated in addition /y/ and /[BU]/ through various mergers with /i/ and /u/. Some Altaic languages in addition distinguish long and short vowel phonemes … Morphologically, the Altaic languages are agglutinative in word structure. That characteristic reveals that (1) words are formed by adding affixes, specifically suffixes, to the root; (2) a relatively great number of such affixes may be added, resulting in extreme cases in polysyllabic and polymorphemic words of considerable length (although three to four morphemes per word is the usual limit); (3) each morpheme in a word has one distinct meaning or grammatical function; and (4) typically the phonological identity of each morpheme is preserved, with little or no modification of one word element by another. The Turkish word in-dir-il-emi-y-ebil-ecek-ler ‘it may be that they will not be able to be brought down’ is analyzable as root word–causative–passive–impotential–potential–future–third person plural, Mongolian eke-yin-iyen ‘of one’s own mother’ as root word–genitive case–reflexive-possessive. The agglutinative, exclusively suffixal morphology gives Altaic words a characteristically left-branching structure … The syntax of the Altaic languages has been remarkably stable and resistant to foreign influence. The lexical categories of Altaic languages are less distinct than in other families. Classical Mongolian dumda, for example, can be a noun (‘middle’), adjective (‘central’), adverb (‘centrally’), and postposition (‘among’). Altaic languages use postpositions, which form phrases with the preceding noun, rather than prepositions, which form phrases with the following noun. They have no articles as such; demonstrative adjectives (‘this’ and ‘that,’ for example) or possessive pronouns (‘its’) are used for the definite articles, and the numeral ‘one(s)’ for the indefinite articles … Altaic languages possess a rich array of auxiliary verbs, and it is possible to string them together, as in Khalkha ter orj irj bayna ‘he is on his way in’ (literally ‘that entering coming is’).”

The Niger-Congo languages have tonal systems, most commonly with two or three contrasting levels of pitch (though four levels are also found and very occasionally even five). The feature of down-step frequently occurs, with the high tone that occurs after a low tone being lower than the preceding high tone. Tonal patterns are often complicated by what are known as “floating tones.” Frequently, when a syllable is deleted or when vowels are elided, the tones carried by those syllables are retained, and they interact with preceding and/or succeeding tones to result in tonal perturbations. Another common feature is that the level of tone is lowered after the occurrence of certain depressor consonants, namely voiced fortis obstruents. The function of tone varies from language to language; sometimes it marks grammatical features, sometimes lexical contrasts. In general, the languages with more tone levels use tone to distinguish lexical items rather than grammatical constructions. Nasalized vowels are common.

The Bantu languages display a variety of tonal systems. Tone may carry a lexical or grammatical function. In Zulu, for instance, the lexical function is shown in the contrast between iyāŋgā ‘doctor’ and iyāŋgá ‘moon’ or yālā ‘refuse’ and yālā ‘begin.’ The grammatical function is illustrated in ūmūntū ‘person’ and ūmūntū ‘it is a person’ or ngīhlānzā ‘I wash’ and ngīhlānzā ‘I washing’ (the
participial form). Noun class systems are universal and almost always marked by prefixes, occasionally by suffixes. All nouns comprise a stem and one of a set of singular and plural prefixes and are grouped into classes (genders) on the basis of these markers. Zulu, for example, has nine pairs of singular and plural prefixes. Most words in a Bantu sentence are marked by a prefix indicating the category to which the noun used as the subject of the sentence belongs, and, if there is an object, the words in that noun phrase and the verb are also marked by a prefix determined by the noun class of the object.

The Dravidian languages use a sound system that has five short vowels (*i/, *e/, *a/, *o/, *u/) and their five long counterparts (*ī/, *ē/, *ā/, *ō/, *ū/). The language has 16 consonants. Vowels that are variable are denoted as V and variable consonants as C. In English, for instance, the combination bVnd, represents band, bend, bind, and bond, while baC represents bad, bag, ban, bat, and so forth. In Dravidian, a hypothetical 17th consonant—a variable laryngeal that is denoted as *H—is needed to explain quantitative changes in vowels and consonants in some cases … Linguists describe sounds by referring to their means of production, which typically combine the flow of air (e.g., constant or interrupted) with the positioning of the tongue and lips. The Proto-Dravidian sound system has six obstruents, or stops (/p/, /t/, /d/, /ṭ/, /c/, /k/), an uncommon number. Obstruent sounds are produced by checking and releasing the airstream with the tip or blade of the tongue at different parts of the oral tract. They can be “voiced” (simultaneously accompanied by vibration of the vocal cords) as in /b/, /d/, and /g/, or “voiceless” (with no vibration of the vocal cords), as in /p/, /t/, and /k/. Sounds other than obstruents are always voiced. Morphologically, a root comprises the basic set of sounds that denote a general concept; prefixes, suffixes, and infixes may be attached to roots to provide them with specific meaning. For instance, the English root r-n(n) ‘the basic idea of running’ (optional components are enclosed in parentheses) may become the specific words run, ran, and running through the affixation of -u-, -a-, and -ing, respectively. The roots of Proto-Dravidian are monosyllabic. A vowel is essential and can stand alone or be preceded or followed by a consonant, as with *ā ‘to become,’ *kā ‘to guard,’ *kan ‘eye,’ and *koy ‘to cut.’ The vowel may be long or short. There are thus eight types of roots in Proto-Dravidian that can be described in terms of V (vowel) and C (consonant) combinations: V1, C1V1, V1C2, C1V1C2, V:1, C1V:1, V:1C2, C1V:1C2.

The Sino-Thai languages do have some common phonetic and morphological characteristics. “Most Sino-Tibetan languages possess phonemic tones, which indicate a difference in meaning in otherwise similar words. There are no tones in Purik, a Western Tibetan language; Ambo, a Northern Tibetan tongue; and Newari of Nepal. Balti, another Western Tibetan language, has pitch differences in polysyllabic nouns. The tones of the remaining Tibetan dialects can be accounted for by positing an original and older system of voiced and voiceless initial sounds that eventually …

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10 In linguistics, a stem is a part of a word. The term is used with slightly different meanings.
resulted in tones. In several Himalayish languages, tones are linked with articulatory features connected with the end of the syllable or are linked with stress features, as also in Kukish Lepcha (Rong) […] Most Baric languages lack tones altogether; and Burmic, Karenic, and Sinitic tonal systems can be reduced to two basic tones ultimately probably accounted for by different syllabic endings. What can be reconstructed for Proto-Sino-Tibetan, the language from which all the modern Sino-Tibetan languages developed, are a set of conditioning factors (as, for example, certain syllabic endings) that resulted in tones; the tones themselves cannot be reconstructed. Again, the features that encouraged the development of tones are not uniquely Sino-Tibetan; similar conditions have produced similar effects in Tai and Hmong-Mien and—within the Austroasiatic languages—in Vietnamese and in the embryonic form of two registers (pitches or vocal qualities) also in Cambodian.”

“Most Sino-Tibetan languages possess or can be shown to have at one time possessed derivational and morphological affixes—i.e., word elements attached before or after or within the main stem of a word that change or modify the meaning in some way. Many prefixes can be reconstructed for Proto-Sino-Tibetan: s- (causative), m- (intransitive), b-, d-, g-, and r-, and many more for certain language divisions and units. Among the suffixes, -s (used with several types of verbs and nouns), -t, and -n are inherited from the protolanguage. The problem of whether Proto-Sino-Tibetan made use of -r- and -l- infixes (besides perhaps semivocalic infixes) has not been solved. Whether clusters containing these sounds were the result of prefixation to roots beginning in r and l (and y) or came about through infixation is not clear … Although the word order of subject–object–verb (SOV) and modified–modifier prevails in Tibeto-Burman, the order subject–verb–object (SVO) and modifier–modified occurs in Karenic. In this respect Chinese is like Karen, although Old Chinese shows remnants of the Tibeto-Burman word order. Tai employs still another order: subject–verb–object (SVO), and modified–modifier, like Austric but unlike Hmong-Mien, which follows the Karen and Chinese model. Word order, even more than any of the other distinguishing features, points to diffusion from several centres, or to unrelated substrata.” (Søren Christian Egerod)

The Austronesian languages present these distinctive characteristics: Most Austronesian languages have 4-5 vowels and 16-20 consonants. Hawai’ian has the second smallest inventory of phonemes of any known languages with 5 vowels and only 8 consonants. In terms of sound system, despite the size and diversity of the Austronesian language family, its members share some commonalities in their sound systems. Their sound inventories range from very simple to average. For instance, Hawai’ian has only 13 phonemes. The vowel systems of Austronesian languages are very simple with 4-5 vowel phonemes, i.e., sounds that differentiate word meaning. Stress in most Austronesian languages can fall on any syllable of a word. It is unpredictable, and serves to differentiate the meaning of otherwise identical words or different forms of a word, e.g., díla
Papuan languages, phonologically, tend to use simple forms of phonology. The standard system of five phonemic vowels (/i/, /ɛ/, /a/, /o/, /u/) is quite common, although other systems do exist. No Papuan language has yet been found to have more than 10 vowel phonemes. Many Papuan languages, especially those of the Sepik-Ramu basin area, have unusual vowel systems, with a very high preponderance of central vowels. Consonantal systems also tend to be simple. Usually, consonants are articulated at one of three places: the lips (this is referred to as bilabial), the back of the teeth (dental), or the back of the roof of the mouth (velar). Some systems add a fourth place of articulation, the high roof of the mouth (palatal). Most languages distinguish at least two types of consonants, an oral one (e.g., /p/) and a nasal (e.g., /m/). In some languages of the Lakes Plain family, however, nasal consonants may be lacking entirely—an extremely rare characteristic among the languages of the world. Morphologically, word structure in Papuan languages exhibits great variation in complexity. In some languages, there is little or no inflection, or marking of the root word for tense, person, number, gender, mood, voice, and case. In others inflection is quite complex. In general—and sometimes to an astounding degree—verbs have a richer capacity for inflection than nouns. The only widespread inflectional categories of nouns are case (to distinguish between nouns, pronouns, and adjectives) and gender. The number of genders range from two to a dozen or more. The languages of the Torricelli and Lower Sepik-Ramu families have a highly unusual system in which the gender of most nouns is determined by their phonological properties. Languages with noun gender typically require all modifiers of the noun to take proper inflectional affixes (prefixes, suffixes, and infixes) to agree in gender and number with the noun. Verbs in Papuan languages can also use inflection to indicate aspect—that is, whether the action is completed or ongoing. In Marind (Marind family), epa-no-kiparud ‘I am tying’ is literally ‘(marker indicating ongoing action) + I + tie.’ To render the sentence “I have tied,” one would say menda-no-kiparud, literally ‘(marker indicating completed action) + I + tie.’ Mood, which indicates whether the action is likely or simply possible, is also a matter of verb inflection. This is illustrated by the Dani language (Trans-New Guinea family, Dani subgroup), in which the verb wathi ‘I killed him’ can be transformed into wasik ‘I will likely kill him’ and waʔle ‘I may possibly kill him.’

(William A. Foley)

I would like to end this section by noting that geolinguistically, the use of articles isn’t a widespread practice. Languages such as many Indo-European languages, especially Romance languages, Semitic languages and Polynesian languages use articles, but some of the world’s major languages, such as Chinese, Indonesian, Japanese, Hindi, Punjabi, Urdu, Russian, and most Slavic languages do not use articles. Language particularities, while they sometimes don’t make sense to non-native speakers, are precisely what makes languages different from one another. It is just the way it is, and that is called linguistic arbitrariness. For example, why do we use certain words to
designate certain things. Whichever way language is used, one thing is certain: it must be effective, meaning our language or speech must display the power to produce an effect or the desired or intended purpose. Language use is universal. Every human being speaks at least one language. Language transcends race and gender. No matter your race, you can learn any language you want. No matter your social status, you must use language to convey your message. Our world wouldn’t be what it is today without language. Effective language carries out intent. In that regard, what we say can be: affective, emotive or connotative, as opposed to cognitive and referential.

• Geolinguistic distribution of languages or language geography

Geolinguistically, it is important to also note that there are numerous types of languages in terms of family. For example, in the analysis of the phonetic and morphological use of the languages that I just made above, I have considered languages in terms of their respective families rather than in terms of their respective individual specificities or characteristics. According to About World Languages: “Most languages belong to language families. A language family is a group of related languages that developed from a common historic ancestor, referred to as protolanguage (proto means ‘early’ in Greek). The ancestral language is usually not known directly, but it is possible to discover many of its features by applying the comparative method that can demonstrate the family status of many languages. How did the protolanguage that the first humans spoke sound? The answer could be anybody’s guess. However, in her article The Original Human Language (sounded) Like Yoda Sounded, Natalie Wolchover for Live Science, writes: "Many linguists believe all human languages derived from a single tongue spoken in East Africa around 50,000 years ago. They’ve found clues scattered throughout the vocabularies and grammars of the world as to how that original "proto-human language" might have sounded. New research suggests that it sounded somewhat like the speech of Yoda, the tiny green Jedi from "Star Wars." ... The researchers came to their conclusion after creating a language family tree, which shows the historical relationships between all the languages of the world. For example, all the Romance languages (Italian, Rumanian, French, Spanish) derive from Latin, which was spoken in Rome 2,000 years ago; that Latin family is itself a branch of an even larger tree, whose other branches include Germanic, Slavic, Greek, Indic and others. Together, all those languages make up the Indo-European language family, which fits like a puzzle piece with all the other language families in the world." Sometimes a protolanguage can be identified with a historically known language. Thus, provincial dialects of Vulgar Latin are known to have given rise to the modern Romance languages, so the Proto-Romance language is more or less identical to Latin. Similarly, Old Norse was the ancestor of Norwegian, Swedish, Danish and Icelandic. Sanskrit was the protolanguage of many of the languages of the Indian subcontinent, such as Bengali, Hindi, Marathi, and Urdu. Further
back in time, all these ancestral languages descended, in turn, from one common ancestor. We call this ancestor Proto-Indo-European (PIE). Language families can be subdivided into smaller units called branches. For instance, the Indo-European family has several branches, among them, Germanic, Romance, and Slavic.” The map below shows the distribution of major language families across the world. Let’s simply call it the world language families map.

![Map of Language Families](image)

Families of languages – Photo credit: Freelang Dictionary

- **Amerindian languages** or American Indian languages are a group of languages comprised of any languages spoken by Amerindians. These languages are divided into North American Indian languages, Mesoamerican Indian languages, and South American Indian languages. 1) **North American Indian languages** are indigenous to the United States and Canada and that are spoken north of the Mexican border. A number of language groups within this area, however, extend into Mexico, some as far south as Central America. The North American Indian languages are so diverse that there is no feature or complex of features shared by all. At the same time, there is nothing primitive about these languages. They draw upon the same linguistic resources and display the same regularities and complexities as do the languages of Europe and elsewhere in the world. North American Indian languages have been grouped into 57 language families, including 14 larger language families, 18 smaller language families, and 25 language isolates (languages with
no known relatives, thus language families with but a single member language). Geographically, too, the diversity of some areas is notable. Thirty-seven families lie west of the Rocky Mountains, and 20 of those exist solely in California; California alone thus shows more linguistic variety than all of Europe. 2) Mesoamerican Indian languages form a group of more than 125 languages classified into some 10 language families (including language isolates) that are native to Mesoamerica. The term “Mesoamerica” refers to a culture area originally defined by a number of culture traits shared among the pre-Columbian cultures of the geographical region that extends from the Pánuco River in northern Mexico to the Lempa River in El Salvador and along the Pacific coast of Nicaragua and Costa Rica. Mesoamerica is also a linguistic area, which roughly coincides with the culture area. The term is sometimes treated as synonymous with “Middle America,” though Middle America is larger, including also all of Mexico and Central America. 3) South American Indian languages form a group of languages that once covered and today still partially cover all of South America, the Antilles, and Central America to the south of a line from the Gulf of Honduras to the Nicoya Peninsula in Costa Rica. Estimates of the number of speakers in that area in pre-Columbian times vary from 10,000,000 to 20,000,000. In the early 1980s there were approximately 15,900,000, more than three-fourths of them in the central Andean areas. Language lists include around 1,500 languages, and figures over 2,000 have been suggested. For the most part, the larger estimate refers to tribal units whose linguistic differentiation cannot be determined. For example, there are hundreds of spoken languages in the Amazon. In her book The Languages of the Amazon, Alexandra Y. Aikhenvald describes the languages of the Amazon basin as being “among the most fascinating in the world. This is where one finds unusual sounds, unexpected ways of classifying nouns, elaborate positional verbs, to name just a few features. Most Amazonian languages have been in contact with each other for many generations. Many people are multilingual, and the unusual patterns of multilingualism have given rise to intriguing patterns of language contact, extensive linguistic areas, and numerous features shared due to contact between people. There are over 300 languages grouped into over fifteen language families, plus a fair number of isolates. The six major linguistic families of the Amazon basin are Arawak, Tupí, Carib, Panoan, Tucanoan and Macro-Jê; smaller families include Makú, Guahibo, Yanomami, Witotoan, Zaparoan, Tacana, Harakmbet, Arawá and Chapacuran. Discussion in the book also includes, albeit in more cursory fashion, language families spoken in the areas adjacent to Lowland Amazonia: Chibchan, Barbacoan, Choco, and Guaicuruan.” Because of extinct tribes with unrecorded languages, the number of languages formerly spoken is impossible to assess. Only between 550 and 600 languages (about 120 now extinct) are attested by
linguistic materials. Fragmentary knowledge hinders the distinction between language and dialect and thus renders the number of languages indeterminate.

- **Chamito-Semitic languages**, a former name for Afro-Asiatic languages, are a family of languages spoken or formerly spoken in Southwest Asia and Africa, having as branches Semitic, Egyptian, Berber, Cushitic, and Chadic. According to Britannica, “In terms of structure, the attested Semitic languages form four main clusters: Akkadian; the Northwest Semitic group, comprising the Canaanite and Aramaic groups, together with Ugaritic and Amorite; Arabic; and the Southwest Semitic group, comprising the Ethiopic and Modern South Arabian languages and quite possibly the Epigraphic South Arabian group. The position of Eblaite, which shares features with both Akkadian and the Northwest Semitic languages, remains debated.”

- **Niger-Congo languages** are a family of languages of Africa, which in terms of the number of languages spoken, their geographic extent, and the number of speakers is by far the largest language family in Africa. The area in which these languages are spoken stretches from Dakar, Senegal, at the westernmost tip of the continent, east to Mombasa in Kenya and south to Cape Town, South Africa.
• **Bantu languages** are a group of some 500 languages belonging to the Bantoid subgroup of the Benue-Congo branch of the Niger-Congo language family. The Bantu languages are spoken in a very large area, including most of Africa from southern Cameroon eastward to Kenya and southward to the southernmost tip of the continent. Twelve Bantu languages are spoken by more than five million people, including Rundi, Rwanda, Shona, Xhosa, and Zulu. Swahili, which is spoken by five million people as a mother tongue and some 30 million as a second language, is a Bantu lingua franca important in both commerce and literature.

• **Indo-European languages** are a family of languages spoken in most of Europe and areas of European settlement and in much of Southwest and South Asia. The term Indo-Hittite is used by scholars who believe that Hittite and the other Anatolian languages are not just one branch of Indo-European but rather a branch coordinate with all the rest put together;
Thus, Indo-Hittite has been used for a family consisting of Indo-European proper plus Anatolian. As long as this view is neither definitively proved nor disproved, it is convenient to keep the traditional use of the term Indo-European.

- **Dravidian languages** are a family of some 70 languages spoken primarily in South Asia. The Dravidian languages are spoken by more than 215 million people in India, Pakistan, and Sri Lanka. According to Britannica, the Dravidian languages are divided into South, South-Central, Central, and North groups; these groups are further organized into 24 subgroups. The four major literary languages—Telugu, Tamil, Malayalam, and Kannada—are recognized by the constitution of India. They are also the official languages of the states of Andhra Pradesh, Tamil Nadu, Kerala, and Karnataka (formerly Mysore), respectively. The word drāviḍa/drāmiḍa and its adjectival forms occur in Classical Sanskrit literature from the 3rd century BCE as the name of a country and its people. Drāviḍa as the name of a language occurs in Kumarila-Bhatta’s Tantravartika (“Exposition on the Sacred Sciences”) of approximately the 7th century CE. In these and almost all similar cases, there is reason to believe that the name referred to the Tamil country, Tamil people, and Tamil language. Robert Caldwell, the Scottish missionary and bishop who wrote the first comparative grammar of the Dravidian languages (1856), argued that the term sometimes referred ambiguously to South Indian people and their languages; he adopted it as a generic name for the whole family since Tamil (tamiḻ) was already the established name of a specific language.

- **Austronesian languages**, formerly called Malayo-Polynesian languages, are a family of languages spoken in most of the Indonesian archipelago; all of the Philippines, Madagascar, and the island groups of the Central and South Pacific (except for Australia and much of New Guinea); much of Malaysia; and scattered areas of Vietnam, Cambodia, Laos, and Taiwan. In terms of the number of its languages and of their geographic spread, the Austronesian language family is among the world’s largest. Major Austronesian languages include Cebuano, Tagalog, Ilocano, Hiligaynon, Bicol, Waray-Waray, Kapampangan, and Pangasinan of the Philippines; the group also includes: Malay,
Javanese, Sundanese, Madurese, Minangkabau, the Batak languages, Acehnese, Balinese, and Buginese of western Indonesia; and Malagasy of Madagascar.

- **Papuan and Australian languages**: Papuan languages are a group of languages spoken in New Guinea and its surrounds. The area includes the entire island of New Guinea and the offshore islands of New Britain, New Ireland, Sorenarwa (Yapen), and Biak, as well as the adjoining areas of eastern Indonesia, especially the islands of Timor, Alor, and Halmahera. Some 1,100 languages—about a quarter of the world’s known languages—are spoken in this region. These include the approximately 800 Papuan languages as well as some 300 Austronesian languages.

- **Ural-Altaic languages**: hypothetical language grouping that includes all the languages of the Uralic and Altaic language families. Most of the evidence for including the Uralic and Altaic languages in one language family is based on similarities of language structure rather than on a common core of inherited vocabulary. Common Ural-Altaic linguistic features present in most of the languages include vowel harmony (i.e., vowels in the same word must harmonize in method of articulation); grammatical traits typical of languages with a basic subject–object–verb sentence word order—e.g., the complete absence of prefixes; the use of suffixes and postpositions to express the grammatical modifications that are expressed in English by prepositions; lack of adjectival declension and of grammatical gender; and similarity in form of nouns and verbs. These types of similarities frequently arise through language contact and are not considered a valid basis for establishing genetic relationship. Examples of Uralo-Altaic languages include: Chuvash language, Evenk language, Manchu language, Manchu-Tungus languages, Mongol language, Mongolian languages, Tatar language, and Turkic languages.

- **Sino-Thai languages**: Sino languages or Chinese languages, also called Sinitic languages, Chinese Han, form the principal language group of eastern Asia, belonging to the Sino-Tibetan language family. Chinese exists in a number of varieties that are popularly called dialects but that are usually classified as separate languages by scholars. More people speak a variety of Chinese as a native language than any other language in the world, and Modern Standard Chinese is one of the six official languages of the United Nations. Tai languages are a closely related family of languages, of which the Thai language of Thailand is the most important member. Because the word Thai has been designated as the official name of the language of Thailand, it would be confusing to use it for the various other languages of the family as well. Tai is therefore used to refer to the entire group.

Because of this diversity, language is not impervious to change and evolution as speakers themselves change and evolve to adapt to the environment. Language emerged at a moment when humans needed a more effective tool to communicate their needs, those of others, and especially
their psychological states or their feelings. It was an innovation\textsuperscript{11} and, like any other innovation, it had to evolve or die because once an innovation stops evolving, it becomes archaic. Today, spoken languages around the world all have evolved into one form or the other. Language must go through an evolutionary process to guarantee its survival. Therefore, let’s take a look at this process.

Evolution of spoken language

How does language evolve? Simply put, it is appropriate to say that language evolves because we invent new words while we stop using older ones. But, the thing is, sometimes it’s possible that those old words or archaic words make a comeback and are in style again or they may no longer be in everyday use or have lost a particular meaning in current usage but are sometimes used to impart an old-fashioned flavor to historical novels, for example, or in standard conversation or writing just for a humorous effect. Some, such as \textit{bedlam}, reveal the origin of their current meaning, while others reveal the origin of a different modern word, as with \textit{gentle}, the sense of which is preserved in gentleman. Some, such as \textit{learn}\textsuperscript{12} and \textit{let}, now mean the opposite of their former use. Other examples include: \textit{ague} = malaria or a similar illness; \textit{affright} = frighten (someone); \textit{coz} = cousin, etc. Therefore, words can outlive several generations of people. Sometimes, archaic words or even completely dead languages may pique contemporaneous people’s curiosity. For example, the following poem was written in the ancient Gothic language (the language of the Ostrogoths and Visigoths c. AD300) by J.R.R. Tolkien\textsuperscript{13} in the 1930s:

<table>
<thead>
<tr>
<th>Gothic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{Bagmē Blōma}</td>
<td>\textit{Flowers of the Trees}</td>
</tr>
<tr>
<td>Brunaim bairīþ bairka bogum</td>
<td>On glorious branches, glittering and</td>
</tr>
<tr>
<td>laubans liubans liudandei,</td>
<td>Pale green as she grows,</td>
</tr>
<tr>
<td>gilwagroni, gɪlmunjandei,</td>
<td>The birch tree bears her lovely leaves,</td>
</tr>
<tr>
<td>bagme bloma, blauandei,</td>
<td>The flower of flowering trees,</td>
</tr>
<tr>
<td>fagrafahsa, li̱u̱liṉi̱,</td>
<td>Fair of hair and lithe of limb,</td>
</tr>
<tr>
<td>frau̱jinondei fa̱iṟg̱uni.</td>
<td>The mistress of the mountain.</td>
</tr>
<tr>
<td>Wopjand windos, waj̱jand lindos,</td>
<td>The winds now call, soft winds are stirring,</td>
</tr>
<tr>
<td>luṯi̱p limam laikandei;</td>
<td>She lowers her limbs in play.</td>
</tr>
</tbody>
</table>

\textsuperscript{11} Innovation in terms of the discovery of how easier it was to use spoken words or sounds when communicating and in terms of when the first human (or first group of humans discovered the ability to speak). But language ability emerged because of genetic mutation of the gene FOXP2.

\textsuperscript{12} From c. 1200 as "to hear of, ascertain." Transitive use (He learned me (how) to read), now considered vulgar (except in reflexive expressions, I learn English), was acceptable from c. 1200 until early 19c. It is preserved in past participle adjective learned "having knowledge gained by study." Old English also had læran "to teach".

\textsuperscript{13} John Ronald Reuel Tolkien, CBE, FRSL was an English writer, poet, philologist, and university professor who is best known as the author of the classic high-fantasy works The Hobbit, The Lord of the Rings, and The Silmarillion.
However, archaic words are not to be confused with archaic or primitive languages. No spoken languages of the 21st century is primitive. They are all modern languages. Because of that, I would like to look at the evolution of language from a different angle by considering rather a few theories and the dynamism that has caused some languages to die out or to become extinct in order to see if a single language for a better world motto would be possible in the future.

Specific views on evolution of spoken language

- **Emergentism**: an approach in psycholinguistics which posits an interaction between biological (nativist) and environmental (empiricist) processes in language acquisition, and provides an alternative to earlier theories which focused exclusively on one set of factors (e.g. innateness, cognition, input). Acquisition is seen to be the result of both innate constraints and environmental input, which dynamically interact to yield language. For example, the child’s early guesses about word meaning are viewed as the result of an interaction between parental input, the child’s cognitive awareness, and the way information is stored and retrieved in the child’s brain. There is particular interest in the ways higher-order structures emerge from lower-order interactions (‘upward causation’) and the ways higher-order interactions can affect lower levels (‘downward causation’). Thus, social interaction, communication, and environmental changes are the primary focus of emergentism. The mechanical and cognitive aspects play a substantial role in language acquisition. This theory also posits that children’s linguistic ability goes through a series of stages before they can be compared to that of adults. The end result is the communication to the children – from his parents and his environment – of what is necessary to develop his own idiolect. Emergentism is often compared to externalism and essentialism, which are both closely related and complementary to emergentism itself, without which they wouldn’t be able to exist. This theory corroborates the potential emergence of a universal
native language as the processes would be the same with the regard to how children acquire and use languages.

- **Glossogenetics**: term sometimes used in linguistics to refer to the study of the origins and development of language, both in the child and in the human race. It involves a wide range of contributing sciences, including biology, anthropology, psychology, semiotics, neurology and primatology, as well as linguistics. However, the main focus is the human’s anatomy of the vocal apparatus.

- **Lexical diffusion**: term used in sociolinguistics and historical linguistics for the increased use of a language or linguistic form throughout an area over a period of time. Specifically, the theory of lexical diffusion explains the way a sound change moves through the vocabulary of a language, emphasizing that it spreads differentially and gradually through the words to which it applies, and not in an ‘across-the-board’ manner at a uniform rate. Some speakers introduce a change into their speech before others; some use it more frequently and consistently than others; and some words are affected before others.

- **Ding-dong theory**: the name of one of the speculative theories about the origins of language; it argues that speech arose because people reacted to the stimuli in the world around them, and spontaneously produced sounds (‘oral gestures’) which in some way reflected the environment. The main evidence is the use of sound-symbolism (which is, however, very limited in a language). The theory has also been called the ta-ta theory – a skeptical reference to the claim that the way the tongue moves while saying the words ta-ta reflects the physical act of waving goodbye. The term has no standing in contemporary linguistics.

- **Yo-ho-ho theory**: the name of one of the speculative theories about the origins of language: it argues that speech arose because, as people worked together, their physical efforts produced communal, rhythmical grunts, which in due course developed into chants, and thus language. The main evidence is the use of universal prosodic features (but these provide only a small part of language structure). The term has no standing in contemporary linguistics.

- **État de langue or synchronic linguistics**: a French term introduced into linguistics by Ferdinand de Saussure, referring to a “state of language” seen as if at a particular point in time, regardless of its antecedents or subsequent history. An état de langue is therefore the primary subject-matter of synchronic linguistic study. For example, Middle English,
sixteenth century, 1920’s. This approach is also called synchronistic linguistics. Whether it’s helpful to the understanding of language evolution is hypothetical because it studies languages at a theoretical point in time and disregards changes that may have occurred in the past or likely to occur in the future. Therefore, it’s worth to be considered when looking at the linguistic global status quo but is of little help when considering the dynamism of language and the potential emergence of a single and universal language that we are concerned with in this book.

- **Diachronic linguistics or linguistic diachrony**: One of the two main temporal dimensions of linguistic investigation introduced by Ferdinand de Saussure, the other being synchronic as mentioned above. In diachronic linguistics (sometimes called linguistic diachrony), languages are studied from the point of view of their historical development – for example, the changes which have taken place between Old and Modern English could be described in phonological, grammatical and semantic terms. An alternative term is historical linguistics. The earlier study of language in historical terms, known as comparative philology, does not differ from diachronic linguistics in subject-matter, but in aims and method. More attention is paid in the latter to the use of synchronic description as a preliminary to historical study, and to the implications of historical work for linguistic theory in general.

This last theory seems more suitable to the analysis of language evolution because it considers language as a dynamic phenomenon and not a static one. Language, in the sense of speech, may have a relatively static nature at the physical or mechanical and the psychological or cognitive levels for, while spoken languages have changed over time, the process by which humans acquire the ability to use language or speech as a means of communication hasn’t changed. The goal of this book is to see whether it’s possible for a single language to emerge out of the many that are currently spoken throughout the world. To do so, I will thus assume that the human language acquisition process will not change and will remain as is way into the future and only spoken languages will change as they have over the centuries. So, let’s take a new approach, a comparative one.

**Broad views on evolution of spoken language**

A careful reading of the above sections entitled "Phonetic and morphologic use of languages or linguistic typology" and "Geolinguistic distribution of languages or language geography" under the heading "Characteristics of language use" should have provided you with a clear, precise and
complete idea on the evolution of language. I would like to point out, however, that while I have given a physical, typological, and topographical description of the evolution of language in these two parts, I shall give, in this section, a causal description of the evolution of language. To do this, I will consider the following points: 1) what is language evolution? 2) comparative or historical linguistics: an essential tool in the understanding of the dynamism of spoken languages; 3) how and why spoken languages change; 4) Latin, the not-so-dead language; 5) Latin’s death versus Greek survival; 6) the unavoidable fate of current spoken languages; and 7) the fact that the development of linguistic ability by animals could be a catalyst for human linguistic unification.

• What is language evolution?

In the past, linguists relied heavily on evolutionary linguistics, itself a field of psycholinguistics to understand and explain the origin and the evolution of language. In addition to the above definition of psycholinguistics, to be more precise, I would like to add that it is a field that focuses on the psychological and neurobiological factors that enable humans to acquire, use, comprehend, and produce language. Their initiatives hit a snag when they realized that they lack empirical data, which created a vacuum. That is explained by the fact that spoken language leaves no traces that could tracked. For many decades, their interests in psycholinguistics dimmed, until the end the 19th century when significant advances were made in biolinguistics, psycholinguistics, neurolinguistics, evolutionary anthropology, evolutionary psychology, universal grammar, and cognitive science. Today, the resurgence of interest in evolutionary linguistics is due to the discovery of the relationship between language and genetics, confirmed by the discovery of the mutation of the language gene FOXP2. Language evolution is best understood by applying evolutionary theory to the study of language. What that means is both biological species and language types evolve under the impact of the environment, but the processes or the paths of the two are different. While biological species either evolve or go extinct to give rise to new species better fit to survive the environment, languages must be moved over long distances to substantially change. Human language is complex and the study of its evolution even more complex. For example, scientists have long argued that language communication is unique to humans because our larynx is located lower in our neck compared to that of animals like chimpanzees. William Tecumseh Sherman Fitch has shown that low larynx is not unique to humans. Today, linguists tend to think that the uniqueness of human language has more to do with the language gene FOXP2.

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14 See “Universality of language and genetics” (page 117)
Evolution of language or evolutionary linguistics is no longer a field that linguists can afford to overlook, as it’s intricately linked to other major scientific and promising fields. Language, like everything else perceptible by the senses, cannot escape the environment and is therefore subject to change. Spoken language can be compared to a celestial body near a black hole. Sooner or later, it will be caught up in the black hole’s gravitational pull, from which even light, though asomatous, cannot escape. That prompted linguists around the world to organize international conferences on the evolution of language, which are known as “EVOLANG Conferences” since 1996, when the first international conference on the evolution of language was hosted by the University of Edinburgh in April of that year. According to the organization, “the Evolution of Language conferences (a.k.a. Evolang) is a series of biennial conferences, that started in 1996 with the first edition in Edinburgh, U.K. Since that time the conferences have become bigger and more professional with every edition, and have firmly established themselves as the major conference for research on the origins of language. Evolang is not organized through any existing formally constituted body, but by an evolving organizing committee consisting of some past local organizers and some past editors of publications arising from the conferences.” The table below shoes a description of the conference details, its organizational cycle, and its history by the organization’ website as of August 2017.

<table>
<thead>
<tr>
<th>EVOLANG – Evolution of Language International Conferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conference details</strong></td>
</tr>
<tr>
<td>The Evolang conference series provides the major meeting for researchers worldwide in the origins and evolution of language. The Evolang conferences are interdisciplinary, with contributions from disciplines including, but not limited to: anthropology, archeology, artificial life, biology, cognitive science, genetics, linguistics, modeling, paleontology, physiology, primatology, and psychology. Typically, about 300 delegates attend, with representatives from all these disciplines. Normal standards of academic excellence apply. Submitted papers should aim to make clear their own substantive claim, relating this to relevant scientific literature, and briefly setting out the method by which the claim is substantiated, the nature of the relevant data, and/or the core of the theoretical argument concerned. Submissions may be theory-based, but empirical studies should not rest on preliminary results. All submissions are refereed by at least three relevant referees, and acceptance is based on a scoring scheme pooling the reports of the referees. In recent conferences, the acceptance rate has been about 50%. The conference showcases both oral presentations and poster presentations.</td>
</tr>
<tr>
<td><strong>Conference organizational cycle</strong></td>
</tr>
</tbody>
</table>

Evolution of language or evolutionary linguistics is no longer a field that linguists can afford to overlook, as it’s intricately linked to other major scientific and promising fields. Language, like everything else perceptible by the senses, cannot escape the environment and is therefore subject to change. Spoken language can be compared to a celestial body near a black hole. Sooner or later, it will be caught up in the black hole’s gravitational pull, from which even light, though asomatous, cannot escape. That prompted linguists around the world to organize international conferences on the evolution of language, which are known as “EVOLANG Conferences” since 1996, when the first international conference on the evolution of language was hosted by the University of Edinburgh in April of that year. According to the organization, “the Evolution of Language conferences (a.k.a. Evolang) is a series of biennial conferences, that started in 1996 with the first edition in Edinburgh, U.K. Since that time the conferences have become bigger and more professional with every edition, and have firmly established themselves as the major conference for research on the origins of language. Evolang is not organized through any existing formally constituted body, but by an evolving organizing committee consisting of some past local organizers and some past editors of publications arising from the conferences.” The table below shoes a description of the conference details, its organizational cycle, and its history by the organization’ website as of August 2017.
EVOLANG – Evolution of Language International Conferences

- Evolang takes place every two years, in March or April of even-numbered years, over three days (two half days and two full days).
- The call for submissions goes out in the early months of the preceding year.
- The deadline for submissions is in August or September of the preceding year.
- Acceptance notifications are sent in October of the preceding year.
- The conference announcement, with provisional programme, is made in January of the year of the conference.

Conference history

The Evolution of Language conferences (a.k.a. Evolang) is a series of biennial conferences, that started in 1996 with the first edition in Edinburgh, U.K. Since that time the conferences have become bigger and more professional with every edition, and have firmly established themselves as the major conference for research on the origins of language. Evolang is not organized through any existing formally constituted body, but by an evolving organizing committee consisting of some past local organizers and some past editors of publications arising from the conferences.


Evolang 2, 1998: After the first conference, there was a consensus that we should do it again, but not too often. Thus, the biennial routine was set. The Second International Conference on the Evolution of Language was hosted by the University of East London in April 1998, with Chris Knight as local organizer. A book resulting from the conference appeared later --2000 The Evolutionary Emergence of Language: Social function and the origins of linguistic form, edited by Chris Knight, Michael Studdert-Kennedy and James R Hurford. Cambridge University Press. See: http://www.infres.enst.fr/confs/evolang/Londonbook.html.

Evolang 3, 2000: This took place in Paris, organized locally by Jean-Louis Dessalles, at the Ecole Nationale Supérieure des Télécommunications (ENST). The book emerging from this conference was edited by Alison Wray, titled The Transition to Language, published by Oxford University Press (2002). This conference marked a significant upgrade in professional management. For the programme, see: http://www.infres.enst.fr/confs/evolang/program.html.

Evolang 4, 2002: This was at Harvard University, Cambridge, Massachusetts, organized locally by Tecumseh Fitch. For details, see: http://www.ling.ed.ac.uk/evolang/2002/. The book to emerge from this conference was edited by Maggie Tallerman, titled Language Origins: Perspectives on Evolution, published by Oxford University Press (2005).

Evolang 5, 2004: This was hosted by the Max Planck Institute for Evolutionary Anthropology, Leipzig, and locally organized by Bernard Comrie. For details, see: http://www.ling.ed.ac.uk/evolang/2004/.
Though the conference was a success, no book publication ensued. This was the first conference in the series at which the acronym Evolang became current.

**Evolang 6, 2006:** This was held at the University of Rome “La Sapienza”, locally organized by Angelo Cangelosi. For details, see: http://www.tech.plym.ac.uk/socce/evolang6/. At this conference, a full book of all the submitted papers was produced and circulated at the conference. It was produced and published by World Scientific (Singapore) with the title 'The Evolution of Language', edited by Angelo Cangelosi, Andrew Smith and Kenny Smith.

**Evolang 7, 2008:** This was held at the CosmoCaixa (Museum of Science) in Barcelona, locally organized by Ramon Ferrer i Cancho of the Universitat de Barcelona. For details, see: http://stel.ub.edu/evolang2008/. As for the previous conference, a full book of all the submitted papers was produced and circulated at the conference. It was produced and published by World Scientific (Singapore) with the title 'The Evolution of Language', edited by Ramon Ferrer i Cancho, Andrew Smith and Kenny Smith.

**Evolang 8, 2010:** This was hosted by Utrecht Institute of Linguistics OTS (UiL OTS) of Utrecht University, and was locally organized by Martin Everaert and Rudolf Botha. Details of the conference are available at: http://www.illc.uva.nl/LaCo/evolang/

**Evolang 9, 2012:** This was hosted by the University of Tokyo, but was held in Kyoto. The local organizer was Kazuo Okanoya. Details of the conference are available at: http://kyoto.evolang.org/

**Evolang 10, 2014:** This was hosted by the Department of English at the University of Vienna. It was locally organized by Nikolaus Ritt and Andreas Baumann. Details of the conference are available at: http://vienna.evolang.org/

- **Comparative or historical linguistics: an essential tool in the understanding of the dynamism of spoken languages**

Comparative linguistics is a major branch of linguistics, in which the primary concern is to make statements comparing the characteristics of different languages (dialects, varieties, etc.), or different historical states of a language. During the nineteenth century, the concern for comparative analysis was exclusively historical, as scholars investigated the relationships between such families of languages as Sanskrit, Greek, Latin, their hypothetical antecedents (i.e. the proto-language from which such families developed), and the subsequent processes which led to the formation of the language groups of the present day. This study became known as comparative
philology (or simply philology) – sometimes as comparative grammar. The phrase comparative method refers to the standard comparative philological technique of comparing a set of forms taken from cognate languages in order to determine whether a historical relationship connects them. If there were such a relationship, this analysis would then be used to deduce the characteristics of the ancestor language from which they were assumed to have derived. Comparative linguistics look at how one or more languages influence or have influenced another or other languages especially historically. If linguistics is the scientific study of language, philology, a sub-field of linguistics, studies the historical growth and adaptation of languages, especially in written literature and is sometimes called historical linguistics. Comparative linguistics allows us to understand the dynamism of language by explaining how languages change over time, how they shift, or how they eventually die. The language process is an essential tool to consider in our quest to find out if the mechanism and the dynamism of language can favor the emergence of a universally spoken language because it is, along with the mechanical and cognitive processes of language acquisition, the building block of the dynamics of spoken languages.

Comparative linguistics is all the more important that it helps us understand the direct relationship that exists between the sounds of a specific language and those of other languages especially if they belong to the same type of language. For example, English is a West Germanic language, while Italian is a Romance language. However, they both belong to the broader category of Indo-European languages. According to Britannica, “An assumption important to the comparative method is the Neogrammarian principle that the laws governing sound change are regular and have no exceptions that cannot be accounted for by some other regular phenomenon of language. As an example of the method, English is seen to be related to Italian if a number of words that have the same meaning and that have not been borrowed are compared: piede and “foot,” padre and “father,” pesce and “fish.” The initial sounds, although different, correspond regularly according to the pattern discovered by Jacob Grimm and named Grimm’s law after him; the other differences can be explained by other regular sound changes. Because regular correspondences between English and Italian are far too numerous to be coincidental, it becomes apparent that English and Italian stem from the same parent language. The comparative method was developed and used successfully in the 19th century to reconstruct this parent language, Proto-Indo-European, and has since been applied to the study of other language families.”

Spoken languages are all about sounds. It’s the differences in sounds that create diversity in spoken languages. The sounds produced when speaking have the same properties as other sounds. They travel through the air in the form...
of waves. Speakers produce sound waves. Sound is variation in pressure. If we measure the pressure variation at a fixed point in time for a sinusoidal sound wave, and plot the measurements as a function of time, we get something like the figure above. The period T is the time it takes for the same part of the wave's regular repetition to pass by our measurement point again. The following are a few crucial facts about sounds:

1. The speed of sound is the same for all (relevant) frequencies.

2. Because a sound normally propagates in all directions, spreading its energy over the surface of an expanding sphere, and because sound energy (like all energy) is conserved, sound power decreases with distance from the source according to an inverse square law.

3. The propagation of sound in air is linear, which means (among other things) that if we encounter two sounds X and Y simultaneously, the result is just the sum X+Y. (Source: University of Pennsylvania).

The study of speech sound or phonetics involves three different parameters: 1) articulatory phonetics, which has to do with the way vocal organs produce speech sounds; 2) auditory phonetics, which is concerned with the way the listener hears the sounds; and 3) acoustic phonetics, which studies the physical properties of the sound waves produced by the vocal organs, as in the above figure. All three parameters are present in any spoken language. Furthermore, in their study “Sound-meaning similarities found across thousands of languages”, published in September 2014, Cornell university shows that humans tend to use the same sounds for common objects and ideas, no matter what language they are speaking. After analyzing two-thirds of world's languages, “the research demonstrates a robust statistical relationship between certain basic concepts – from body parts to familial relationships and aspects of the natural world – and the sounds humans around the world use to describe them.” “These sound symbolic patterns show up again and again across the world, independent of the geographical dispersal of humans and independent of language lineage,” said Morten H. Christiansen, professor of psychology and director of Cornell’s Cognitive Neuroscience Lab. “There does seem to be something about the human condition that leads to these patterns. We don’t know what it is, but we know it’s there.” For example, in most languages, the word for “nose” is likely to include the sounds “neh” or the “oo” sound, as in “ooze.” The word for “tongue” is likely to have “l” (as in “langue” in French). “Leaf” is likely to include the sounds “b,” “p” or “l.” “Sand” will probably use the sound “s.” The words for “red” and “round” are likely to include the “r” sound. “It does not mean all words have these sounds, but the relationship is much stronger than we'd expect by chance,” Christiansen said. The researchers don't know why humans tend to use the same sounds across languages to describe basic objects and ideas. But Christiansen notes these concepts are important in all languages, and children are likely to learn these words early in life. “Perhaps these signals help nudge kids into acquiring language,” Christiansen said. “Likely it has something to do with the human mind or brain, our ways of
interacting, or signals we use when we learn or process language. That is a key question for future research.”

If, at some point English and Italian branched out to form separate languages, the reverse is also true in terms of the possibility that they regroup, along with other languages during the process leading to the emergence of a potential single and universal native language. I think that language diversity is like a movie scene that rolled out from a single point. At any point, the scene can be rewinded. The notion of that single point is even more important when we consider Africa, from where spoken languages have emerged thousands of years ago. Comparative linguistics sheds light into the quest to find out if a single language can emerge in the future. Understanding why there are so many languages in Africa is of utmost importance if we want to understand the possibilities for the emergence of a universal language. Of course, one might ask: how important is it to be able to read, write and speak an African language? If English now is the most important language in the world, should people in the developing world still be taught local languages, and are they useful for everyday life? The answer to these questions lies within the fact that sometimes, to move forward, it’s best to take a step backward first, which could, then, allow you to sprint forward. What I mean by that is there is no such thing as a tabula rasa to make room for an emergent lingua franca, a universal language, or a global native language, if you will. We would need to first accept everybody in their differences. Trying to fathom the African and Asian linguistic diversities is a must before even thinking about the conception and the spread of a new language. (see “Getting there fast but democratically” in the “Recommendations” section).

**How and why do spoken languages change?**

First, what is language change? It’s a term used to refer to variations that occur over time in a spoken language in terms of phonetics, morphology, semantic, and syntax. Language change is not to be confused with language shift, which is the process that leads to a language’ death. Spoken languages change for a variety of reasons, including economy (of words and time, thus linguistic savings), migration, language contact, industrialization, etc. To save time, speakers of a language may choose to use shorter words to say more in one sentence. Migration over long distances force people to have different experiences and, thus, they tend to use a different vocabulary once they come in contact with the host culture. This is done by a process called acculturation. When speakers of different languages live in proximity, their native languages influence each other, and a new dialect might emerge. Examples: *Spanglish*: dialects or creole languages that result from interaction between Spanish and English; *Franglish* (“Franglais” in French): dialects or creole languages that result from interaction between French and English; or *Singlish*: an English-based creole language spoken in Singapore, which can all be attributed to language contact. Moreover, because of industrialization and technological advances, spoken languages’ vocabularies change.
rapidly in order to keep up. These factors involved in the language change process may cause a specific language to either die or shift. Languages are so dynamic that within the same community a language may take so many aspects. In fact, the notion of national languages is relatively modern. Before the renaissance period, for example, there were many varieties of French that were spoken inside France in the 12th century. Today, German presents the same characteristics. Germans have to go to school to learn the national language.

When a language is no longer spoken or no longer has native speakers, it is referred to as a dead language (although the term “extinct language” is preferred, since language is not a living being). Examples of dead languages and languages that are endangered (meaning on the brink of extinction) abound. Some of them gave rise to other languages while many of them just completely died out. Examples include, but are not limited to:

- **Latin**, which gave rise to the Romance languages such as French, Spanish, Portuguese, Italian, and Romanian.
- **Koine**, which supplanted Ancient Greek and died in turn to give rise to Modern Greek.
- The **Utian languages**, a group of languages (Miwok, Ohlone, or Costanoan languages) spoken by native Americans in the central and north parts of California, United States, which are severely endangered.
- **Old English** and **Middle English** are supplanted by Modern English, which is only about 500 years old. “Old English is one of the West Germanic languages, and its closest relatives are Old Frisian and Old Saxon. Like other old Germanic languages, it is very different from Modern English and difficult for Modern English speakers to understand without study. Old English grammar is quite similar to that of modern German: nouns, adjectives, pronouns, and verbs have many inflectional endings and forms, and word order is much freer.” Baugh (1951). Below is an example of the change of Old English to modern English:
Some examples of Old English texts and their modern English correspondences

<table>
<thead>
<tr>
<th>Original</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dan the dyrre Old Anglisch Tungas eode rpecan</td>
<td>What Life of Gare-Danes (lit. Spear-Danes) in yore-days,</td>
</tr>
<tr>
<td>præost-cynninga, þrym þælgeninga,</td>
<td>of the nation/people kings, did thurh (glory) thynne (learn about by asking),</td>
</tr>
<tr>
<td>hū ðā æþelingas ælgon fremedon.</td>
<td>how those æþelingas (noblemen) did ælien (fortitude/courage/zeal) hene (promote),</td>
</tr>
<tr>
<td>Ŝcylf Scælings scælabætæ ðærum.</td>
<td>Of ßyld Scæling of scælabætæ (troops).</td>
</tr>
<tr>
<td>monegum ðægðum, meodætela of þæn.</td>
<td>of many meæths (clans; cf. irish cognate mac), of meodætæles ætæ (deprive),</td>
</tr>
<tr>
<td>æppæc toleþ.</td>
<td>(and) ugg (induce) loading in, terrify; related to &quot;ugly&quot; earas. Siða (since, as of when) ealh (first) heað (worthed) became.</td>
</tr>
<tr>
<td>fælcur æþelinga.</td>
<td>[Brit] found, he of this house (comfort) abide,</td>
</tr>
<tr>
<td>þæc under gæþum, geþælþeþum þæn.</td>
<td>(and) wære under weæl, (firmament/clouds), (and amid) wære (honour-worthiness) thryð (throw/prospered)</td>
</tr>
<tr>
<td>oððel him æþelinga æþælþeþ.</td>
<td>oððel (until that) him each of those unsîflies (those &quot;sitting&quot; or dwelling roundabout)</td>
</tr>
<tr>
<td>oð of brincinga hyðan scælabætæ.</td>
<td>over whole-read (kenning for &quot;sea&quot;) hear should,</td>
</tr>
<tr>
<td>gømœn gæðan.</td>
<td>[and] yeme (heed/brightness; related to &quot;gormless&quot;) yield. That was ðæ (a) good king</td>
</tr>
</tbody>
</table>

A semi-fluent translation in modern English would be:

Lo! We have heard of many of the Spear-Danes, of those nation-kins in the days of yore, and how those noblemen promoted zeal. Cicily Scæling took away mead-benches from bands of enemies, from many tribes, he terrified ears. Since he was first found destitute (he gained consolation for that) he grew under the heavens, prospered in honours, until each of those who lived around him over the sea had to obey him, give him tribute. That was a good king!


- Many African languages or dialects are also endangered. Among them: Yangkam (Nigerian language), today only spoken by fewer than 100 people. Yakunte is one of six languages in Kenya that have been classified as extinct. According to BBC News, as the continent marked the Year of African Languages in 2006 to help promote the use of the mother-tongue, does it matter if Africa's indigenous languages are dying out? Africa is the most linguistically diverse continent in the world, according to the UN’s Educational, Scientific and Cultural Organization (UNESCO). People speak close to 2,000 different languages which is a third of the world's linguistic heritage. New languages such as Kenya’s sheng, a mixture of English, Swahili and mother-tongues, are emerging. But up to 300 languages...
have less than 10,000 speakers, which puts them on the UN’s endangered list, and 37 are in danger of completely dying out in the next few years.

The list of dead languages and languages that are endangered is long and could be, in itself, a topic for another book, but if you ask anyone for an example of a dead language, you will most likely get “Latin” as the answer, which makes Latin the most popular dead language of all. In light of comparative or historical linguistics, it’s important to note that Latin’s popularity as a dead language offers an important insight into the dynamics of spoken languages. I would say that Latin remains the “most preferred” dead language because it offers hope that the emergence of a universal native language is possible. But how? To answer this question, I would like to show why Latin is still alive and is a part of our daily lives. Latin’s oblivion is a misconception. Let’s see why.

**Latin, the not-so-dead language**

Many people might say: “Latin is definitely a dead language because it fits the definition of a dead language: a language that is no longer spoken for it no longer has native speakers”. I concur. By saying that Latin is a not-so-dead language, I mean that we still use Latin in our daily lives without being aware thereof. Most of the Romance languages’ vocabularies originate from Latin, a fact that can be corroborated by their respective speakers. But if I say same goes for English, that might raise a few eyebrows. The fact is although English isn’t a Romance language, it has thousands of words that come from Latin. Why is that so?

Britain was conquered by Rome and became effectively part of the Roman empire for about 400 years (43 to 410 AD), but English ends up not being Romance language. Why? Under Roman rule, there was a version of vulgar Latin spoken in Britain called British Latin. But, after the Romans left, the Angles and the Saxons invaded Britain from what is now Germany. Latin was quickly displaced by Old English, but the impact of the Roman Empire is expressed nowhere better than in the English language. Today, thousands of English words have their roots from Latin. The languages spoken in Britain prior to the Roman invasion were Celtic, specifically Brythonic. The largest one still spoken (albeit in radically different form) is Welsh, although Cornish is experiencing a limited revival as is Breton. Examples of Latin-based English words that we use in our daily conversations or in literature include, but are not limited to:

- **A cappella**: A cappella arrived in English from Italian sometime around the late-18th century. In Italian, a cappella means "in chapel or choir style." Cappella is the Italian word for "chapel"; the English word chapel is ultimately (if independently) derived from the
Medieval Latin word cappella, which is the source of the Italian cappella as well. Scholars once thought all "chapel style" music written before the 1600s was performed a cappella, but modern research has revealed that instruments might have doubled or substituted for some voices back then. Today a cappella describes a purely vocal performance.

- **Anathema**: Meaning: 1. a person or thing detested or loathed: *that subject is anathema to him.* 2. a person or thing accursed or consigned to damnation or destruction. Origin: Anathema derives from the Late Latin noun *anathema* "curse of excommunication, excommunication," from the Hellenistic Greek *anáthema* originally "anything dedicated," later "a curse," and in the Septuagint (the oldest Greek version of the Old Testament) "a thing devoted to evil." The word entered English in the early 1500s.

- **Antipasto**: Definition: (plural antipasti) means "before the meal" and is the traditional first course of a formal Italian meal. Origin: from Latin ante, meaning "before", and pastus, meaning "meal, pasture".

- **Beatific**: Definition: 1: of, possessing, or imparting a state of utmost bliss. 2: having a blissful appearance. Origin: Beatific—which derives from Latin beatificus, meaning "making happy"—has graced the English language as a word describing things that impart consummate bliss since the 17th century. In theology, the phrase "beatific vision" gained meaning as an allusion to the direct sight of God enjoyed by the blessed in heaven. Today, the word more frequently describes a blissful look or appearance. A closely related word is beatitude, which can refer to a state of utmost bliss or to any of the declarations made by Jesus in the Sermon on the Mount.

- **Bona fides**: Definition: 1) good faith: sincerity. 2) the fact of being genuine. 3) evidence of one's good faith or genuineness. 4) evidence of one's qualifications or achievements. Origin: Bona fides looks like a plural word in English, but in Latin, it's a singular noun that literally means "good faith." When bona fides entered English, it at first stayed very close to its Latin use—it was found mostly in legal contexts and it meant "honesty or lawfulness of purpose," just as it did in Latin. It also retained its singular construction. Using this original sense, one might speak of "a claimant whose bona fides is unquestionable." But in the 20th century, use of bona fides began to widen, and it began to appear with a plural verb in certain contexts. For example, a sentence such as "the informant's bona fides were ascertained" is now possible.

- **Colloquium**: Meaning: 1. an informal gathering for discussion. 2. an academic seminar. Origin: from Latin colloquium "conversation". Also as a legal term; meaning "meeting, assembly, conference, seminar" is attested from 1844.

- **Edacious**: that English word is a descendant of Latin *edax*, which is a derivative of the verb *edere*, meaning "to eat." In its earliest known English uses, edacious meant "of or relating to eating." It later came to be used generally as a synonym of voracious, and it has often
been used specifically in contexts referring to time. That is how Scottish essayist and historian Thomas Carlyle used it when he referred to events "swallowed in the depths of edacious Time."

- **Factitious**: meaning: produced by humans rather than by natural forces. Origin: Like the common words fact and factual, factitious ultimately comes from the Latin verb facere, meaning "to do" or "to make." But in current use, factitious has little to do with things factual and true—in fact, factitious often implies the opposite. The most immediate ancestor of factitious is the Latin adjective facticius, meaning "made by art" or "artificial." When English speakers first adopted the word as factitious in the 17th century, it meant "produced by human effort or skill" (rather than arising from nature). This meaning gave rise to such meanings as "artificial" and "false" or "feigned."

- **Jurisprudence**: Meaning: 1. the science or philosophy of law. 2. a body or system of laws. Origin: Jurisprudence comes from the Late Latin jūrisprūdentia, jūris prūdentia “knowledge of the law,” used in the emperor Justinian’s law codes, published between A.D. 529 and 534 (the Classical Latin phrase is prūdentia jūris). The Latin noun jūs (or its stem jūr-) is the source of jury, injury, perjure, just and justice. Prūdentia “good sense, good judgment, discretion” is a contracted form of the Latin noun prōvidentia “foresight, foreknowledge.” The word entered English in the 17th century.

For more examples, I suggest the *NTC's Dictionary of Latin and Greek Origins* (see bibliography). Because of its status as the most popular dead language and its long-lasting presence in some of the major spoken languages, including English and the Romance languages, Latin epitomizes the goal of comparative linguistics or historical linguistics and offers, as stated above, an important insight into the dynamics of spoken languages. However, if Latin can be used as model in our quest to understand the likelihood of a single and universal native language, Greek should not be overlooked either. Greece was part of the Roman Empire, but Greek it’s not a Romance language. Ironically, all of the Romance languages and English have words that come from Greek. Why is it that Greek is not a Romance language? Why is Latin a dead language and Greek is not? are questions worth asking.

- **Latin’s death versus Greek’s survival**

For starters, Greece isn’t the only country that was part of the Roman Empire but ended up not speaking a Romance language. As we just saw it, Britain is another country. Moreover, the Balkan countries were also part of the Roman empire but speak Slavic languages. Same goes for Anatolia.15

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15 Anatolia, Turkish Anadolu, or Asia Minor roughly corresponds to the Asian part of Turkey, except the eastern parts historically known as the Armenian Highlands.
or Turkey, which speaks Turkish, and North Africa and the Levant, which speak Arabic. However, a common question that people tend to ask is why did Latin die while Greek survived. Well, from my perspective, neither languages died, in terms of historical linguistics. They both survived but evolved differently. It depends how you look at it. To start with Latin, there were two forms of Latin: one that was spoken and used in literature by scholars, government officials, poets, and philosophers called classical Latin, and another form that was informal and spoken by ordinary people. The latter was called vulgar Latin. Back then, the term vulgar didn’t have the same meaning it has today: gross, tasteless, or dirty. It meant of the people and, of course, came from Latin vulgus, which meant of the people. Therefore, vulgar Latin meant the language spoken by the people. By the end of the Roman Empire, Latin didn’t die per se. The regions that adopted dialects derived from Latin as their national languages became themselves empires or very powerful nations – France, Italy, Spain, Portugal – that wanted to retain their identities and exercise their clout over other nations. Other countries like the Balkan countries, Turkey, and regions like North Africa and the Levant chose simply to prioritize other languages and get rid of Latin altogether like the British did. It was a matter of choice and taste. Then, in their quest for regional identities, the regions that kept vulgar Latin as their national languages, progressively spoke and wrote it differently. In the process, Vulgar Latin changed into French, Spanish, Portuguese, Italian, and Romanian.

On the other hand, Greece, also part of the Roman Empire, took a different path. It’s important to mention that there is a difference between Ancient Greek and the Greek language that is spoken today or modern Greek. I mentioned earlier that Ancient Greek was supplanted by Koine, which itself was supplanted by modern Greek. So, if you prefer to say that Latin has died and not take into account the Romance languages, then so did Greek. It’s a fact that both Classical Latin and Classical Greek have died out. But if you see it from a different perspective, it’s important to keep in mind that Greek’s survival is mostly due to the fact that it had a very high status. Greek was spoken in Ancient Rome, just like Latin. With Latin, it was an official language. Moreover, Greek culture, art, philosophy, etc. were very influential. Roman mythological gods, for instance, are exact duplicates of Greek gods. With the exception of law – invented by the Romans, the Greeks were behind advances in medicine, astronomy, astrology, etc. and invented and popularized philosophy. Greek arts were coveted by the Romans themselves, their conquerors. This quote from the poet Horace summarizes the influence that Greece had over its conqueror (Rome): “Graecia capta ferum victorem cepit, et artes intulit agresti Latio”. It’s Latin for “Captive Greece held captive her uncouth conqueror and brought the arts to the rustic Latin lands.” Another reason why Greek held up and didn’t die can be found in an era closer to our time. During the Middle-Ages, Western Europe was politically fragmented – which sped up the differences between the Romance
languages – but Greek was the language of the Byzantine Empire\textsuperscript{16}, which was still unified. Today, many languages, including the Romance languages themselves and English, have vocabularies that abound with words that etymologically derive from Greek. Examples include but are not limited to:

- **Aristocracy:** meaning: form of government that places power in the hands of a small, privileged ruling class. The term derives from the Greek *aristos* = excellent and *kratos* = power. Etymologically, aristocracy means "rule of the best".

- **Ascetic:** meaning: 1. practicing strict self-denial as a measure of personal and especially spiritual discipline. 2. austere in appearance, manner, or attitude. Origin: Ascetic comes from *askētikos*, a Greek adjective meaning "laborious." Ultimately, it comes from the Greek verb askein, which means "to exercise" or "to work."

- **Deleterious:** meaning: Adjective: 1. harmful; injurious: deleterious influences. 2. injurious to health: deleterious gases. Origin of deleterious: Deleterious comes from the Greek adjective δὲλετήριος meaning "destructive." It entered English in the mid-1600s.

- **Democracy:** definition: Democracy is defined as rule of the people by the people and for the people. It's a system of government in which power is vested in the people, who rule either directly or through freely elected representatives. Origins: The term originates from the Greek δημοκρατία (dēmokratía) "rule of the people", which was found from δῆμος (dēmos) "ordinary people" and κράτος (krátoς) "power" or "rule", in the 5\textsuperscript{th} century BC to denote the political systems then existing in Greek city-states, notably Athens; the term is an antonym to ἀριστοκρατία (aristokratía) "rule of an elite".

- **Euthanasia:** from Greek: εὖθανασία; "good death": εὖ, eu; "well" or "good" – θάνατος, thanatos; "death", Euthanasia is the practice of intentionally ending a life in order to relieve pain and suffering.

- **Helicopter:** meaning: an aircraft capable of hover, vertical flight, and horizontal flight in any direction. Most get all of their lift and propulsion from the rotation of overhead blades. Origin: From ancient Greek: helix = spiral and pteron = wing.

- **Kudos:** meaning: 1. fame and renown resulting from an act or achievement: prestige. 2. praise given for achievement. Origin: Deriving from Greek, kudos entered English as slang popular at British universities in the 19\textsuperscript{th} century.

- **Laconic:** meaning: using or involving the use of a minimum of words: concise to the point of seeming rude or mysterious. Example: a laconic style (in literature). Origin: Laconia was an ancient country in southern Greece, bordering on the Aegean and the Mediterranean seas. Its capital city was Sparta, and the Spartans were famous for their terseness of speech. Laconic comes to us by way of Latin from Greek Λακώνικος, which is derived from Lakōn,

\textsuperscript{16} The Byzantine Empire was the eastern half of the Roman Empire, which survived for a thousand years after the western half had crumbled into various feudal kingdoms and which finally fell to Ottoman Turkish onslaughts in 1453.
meaning "native of Laconia." It has been with us since the 16th century and has sometimes been used with the basic meaning "of or relating to Laconia or its inhabitants" (though we're more apt to use Laconian for this meaning today). In current use, laconic means "terse" or "concise," and thus recalls the Spartan tendency to use the fewest words possible.

- **Lexicon**: definition: 1. the vocabulary of a particular language, field, social class, person, etc. 2. a wordbook or dictionary, especially of Greek, Latin, or Hebrew. Origin of lexicon: Lexicon finds its roots in the Greek noun léxis meaning "speech, word." It entered English in the late 1500s.

For more examples, again, please refer to the *NTC's Dictionary of Latin and Greek Origins* (see bibliography). To explain further the widely accepted idea of Latin’s death, I’d like to point out that languages die once their varieties become significantly different from one another, meaning ceasing to be dialects to acquire their own status and become separate languages. The very popularity of a language, in terms of the number of places in which it’s spoken, can cause it to break into different languages. In that regard, English, in its modern form, is already a dying language. American English differs in part or totally from the English spoken in England, Scotland, Wales, Northern Ireland, Isle of Man, Gibraltar, Republic of Ireland, India, West Africa, South Africa, Australia, Belize, and Jamaica to name a few. While these various types of English are mutually intelligible today to some extent, they will be totally different from one another and will therefore lose their mutual intelligibility in a few centuries, and their speakers will have to face reality: give new names to their respective languages. Thus, a phenomenon similar to the emergence of the Romance languages will take place. But, by the way, before that happens, will it be possible for linguists to motivate the world to speak one language, which would be everyone’s native language? What is the fate of currently spoken languages? Could the development of language ability by animals be a catalyst for human linguistic unification? Have we attempted to establish or propose a language – natural or artificial – as a universal language before? If so, have we failed? What are the potential barriers? What would be the best plan to adopt or the best way to circumvent these barriers? These are the questions that I will attempt to answer in the remainder of this book.

- **The unavoidable fate of current spoken languages**

The unavoidable fate of current languages is an important factor in the emergence of a universal language because no language is static. The evolution of languages reflects the dynamic nature of the environment. Today, about 7,000 languages are spoken around the globe. Most of them are not
international languages (see definition above), but rather local languages spoken within a specific geographical area. Languages such as German, Russian, Italian, Turkish, and Greek will be dead after being absorbed or assimilated to either English, French or Spanish, which, in turn, will change. While Chinese is, in 2017, the most spoken language in the world in terms of native speakers, it’s not spoken by enough non-native speakers. The language has not spread enough over Chinese borders to allow it to be spread over time, as opposed to English, French, and Spanish, which makes it a perfect candidate for extinction. China has a history of tending to isolate itself from the rest of the world for that matter. The Great Wall, for example, although it was built in part to prevent the Mongols from invading China, served also another purpose: the preservation of Chinese culture. Today: Google, Facebook, and all major international social networks are blocked by Chinese censure, making the Chinese language a restricted language. Hindi is another language spoken by a large number of people as a first language (425 million) and around 120 million as a second language. Hindi is one of the languages spoken in India. It's the official language of India, English being the other official language. But, like Chinese, it does not cross or spread over India’s borders. Also, India still lacks the economic and cultural influence across the globe to guarantee the internationalization of Hindi. Therefore, it’s doomed to disappear as well. As to French, if in 2017 around the world, about 220 million people speak French, compare to the number of Chinese speakers (1 billion, Cantonese and Mandarin combined), English speakers (1.5 billion), Spanish speakers (400 million), and Arabic speakers (420 million), it’s predicted that by 2050, French will take over English as more and more people will speak French in Africa, due to strong economic growth. That number will likely increase to 750 million in the future. The outlook for the French language is excellent, a fortiori 40% of Mankind will be African by the end of the 21st century, according to a UN study. The Washington Post states: “The UN's projections for Africa are pretty mind-blowing. Africa is expected to more than double its population by 2100. Africa currently accounts for 16 percent of the global population. The UN expects that proportion to rise to 25 percent in 2050 and 49 percent by 2100.” The graph below highlights the parts of the world in terms of the size of their populations in 2015 (in blue) and their growth by the year 2100 (in green) and also in comparison to one another.
But will French be able to spread to new continents like South America, the Middle-East, Asia, and Oceania? No one knows for sure since the economy is sometimes guided by an invisible hand. But one thing is certain: Africa will need to be entirely industrialized and technologically advanced to extend its influence over the rest of the world.

Despite this projection, African languages themselves, along with locally spoken languages in remote parts of the world and minority languages – such as French in Quebec and most of the European languages such as Bulgarian, Croatian, Czech, German, Hungarian, Polish, Romani, and Rusyn will disappear, as they have become endangered or are likely to become endangered (see How and why do spoken languages change above for more). A minority language is a language used in a country by a group which is significantly smaller in number than the rest of the population. Those who speak the language may be nationals of the country, but they have distinguishing ethnic, religious or cultural features which they wish to safeguard. Most countries have several minority languages within their borders. Globally, a minority language is a language spoken by a limited number of people. Endangered is a term used in linguistics for a language which is at risk of becoming extinct within the foreseeable future. As a result of increased survey information during the 1980s and 1990s, it is now thought that over half of the world’s languages are moribund – not being effectively passed on to the next generation.

The outlook for some currently spoken languages is not promising. Even UNESCO acknowledges their potential death. “It is estimated that, if nothing is done, half of the over 6,000 plus languages spoken today will disappear by the end of this century. With the disappearance of unwritten and
undocumented languages, humanity would lose not only an irreplaceable cultural heritage but also valuable ancestral knowledge embedded, in particular, in indigenous languages.”

According to this chart, while 57% of world’s languages are safe, 10% are vulnerable, 30% fall into the endangered category, going from endangered to severely endangered and critically endangered. 4% have been extinct since 1950. While die-hard proponents of multilingualism do not welcome language extinction, linguists are aware of the fact that language death is a natural phenomenon and that the number of spoken languages have reached a plateau a long time ago, since the end of mass migration toward unexplored or uncharted territories, which is now a thing of the past. The whole planet has been mapped out, and there are no more frontiers. Therefore, minority languages have slowly been absorbed by the more dominant, popular, and influential languages. This is what I would call linguistic survival of the fittest. Language death has been happening right where major international languages are also spoken: The Americas, Europe, Africa, Asia, and Australia. For example, in her article *Sixty Languages at Risk of Extinction in Mexico—Can They Be Kept Alive?* Christine Dell’Amore, from National Geographic, reported that “Of the 143 native languages in Mexico, 60 are at risk of being silenced forever, linguists say […] One language, Ayapenaco, is spoken fluently by just two elderly men who aren’t even on speaking terms. Another indigenous language, Kiliwa, is spoken by only 36 people […] While 60 of Mexico’s native tongues are at risk, 21 are critically endangered, with only a few elderly speakers left, according to a statement released recently by Mexico’s Centre of Research and Higher Studies in Social Anthropology (CIESAS) […] The languages most at risk in Mexico—including the Zapotec, the Chatino, and the Seri tongues—are undergoing "rapid change" for a number of reasons, says Lourdes de León Pasquel, a linguist at CIESAS. Among them are ‘migration, social instability, [and] economic and ideological factors that push speakers to adopt Spanish.’” The figure below shows the linguistic problematic of Mexico in terms of minority language death:
Language endangerment is followed by language death unless the trend can be reversed through a language revitalization program. The disappearance of current spoken languages will beget cognate languages. A cognate language is a language or a linguistic form which is historically derived from the same source as another language/form. For example, Spanish, Italian, French, Portuguese are cognate languages. Before that happens, a phenomenon called levelling will take place. In historical linguistics, it’s the gradual loss of a linguistic distinction, so that forms which were originally contrastive become identical. For example, Old English nouns generally distinguished nominative and accusative cases, but in Modern English these have been levelled to a single form. The term is also used in dialectology, where it refers to the lessening of differences between regional dialects as a result of social forces (such as the media) which are influencing people to speak in a similar way. The spread of the phenomenon of Estuary English17 throughout England in the later decades of the twentieth century is an illustration.

17 (in the UK) a type of accent identified as spreading outward from London and containing features of both received pronunciation and London speech.
The merging of current spoken languages will also go through a phenomenon called lexical phonology, a theory of phonology in which morphological and phonological rules are brought together within a single framework. The approach is based on the insight that much of the phonology operates together with the word-formation rules in a cyclic fashion to define the class of lexical items in a language. The morphological sub-theory is ‘level-ordered’: affixes are differentiated, not by the use of boundary-markers (as in earlier phonological theory), but by being divided into distinct subsets (numbered ‘levels’ or ‘strata’) within the lexicon, where the division of the word-formation rules corresponds to a division among the phonological rules. The phonological sub-theory is divided into a lexical (sometimes called a cyclic) component and a post-lexical (sometimes called a post-cyclic) component, the latter also being referred to as the ‘phrasal phonology’, as its rules operate across word boundaries, making use of syntactic structure.

No 21st century language, if it survives, will be spoken the same way nor be spoken by the same number of people in terms of world population say three to four centuries from now. Languages are shaped by people and the environment and as the environment changes, people change with it, along with their traditional languages. About 100,000 – 200,000 years ago, when Homo Sapiens began using spoken language, language diversity didn’t exist. It’s fair to say that at some point in the history of Mankind, we did speak one language and the world was, thus, monolingual. But, things started to change when our ancestors started moving around the globe; and as I pointed it out, language has a tendency to change when moved along great distances. The fate of that initial universal language that we spoke is expressed into the varieties of languages that we know today. That happened partly because the world was huge and uncharted. Today, all the frontiers have been explored. When language first emerged, our world was small because of the limited number of our ancestors. Today, our world has become small again not because there are too few of us – on the contrary – but because of globalization, digital technology, multinationalism, cooperative reach, and networking to name a few factors. This will lead to the reverse trend, meaning out of many languages, one will emerge, as opposed to when humans started moving around, during which process, out of one language, many languages emerged. The graphic below explains the evolution of languages as the first humans were spreading across the rest of the world, out of Africa:
The development of linguistic ability by animals could be a catalyst for human linguistic unification

One day I was at the park. A little boy, who must have been just over two years old, asked his grandmother upon seeing a squirrel: “Grandma, does he talk?” Without a second thought, his grandma replied: “Yeah, every animal has a language; otherwise they wouldn’t play with their own kind” I thought to myself: “that’s not the right answer. She should have said ‘a form of communication’, because the term language is reserved for humans.” But then I thought: “how else can one explain to a two-year-old such a complex issue?” I realized that she did a better job than I would have done by keeping it simple. In the end, she was syllogistically right, because if a
= b, and b = c, then a = c. In other words, if language is a form of communication, and a form of communication is a means used to convey a message, then, language can be whatever is used to convey a message, which makes a language, whatever form of communication each animal uses to convey their message. In fact, the two-year old was so satisfied with his grandma’s answer that he didn’t bother taking his curiosity any further. He has his whole life to figure that one out; and his grandma will be long gone (so will I) when he finally understands the difference between animal language and human language.

The understanding of human language evolution is quintessential to the belief that the emergence of a single and global native language is possible. On the other hand, I’m also quite certain that should an animal species manage to develop language ability like humans did a long time ago, for example, humans might see the necessity to attribute uniqueness to our own language evolution, just to differentiate ourselves from animals. I’m aware that animals already do have their own ways to communicate within their respective species. Here, I mean by language ability the same ability that we, humans, have collectively as a species. If that ever comes true, it might then motivate our species to standardize the diversity of human spoken languages. In cultural linguistics (see below), competition among languages led communities, large ethnic groups, or whole nations to modify existing languages into versions that are specific to them. These versions have different names such as dialects, sociolects, or regiolects. I would like to call this kind of competitive dynamic intraspecific language competition. In the case of a potential development of language ability by animals, that would elicit the coming together of humans to create a universal language that only us can speak and understand, I would like to call this kind of potential coalition interspecific language competition. Either way, both kinds of competitions would occur because of differences in interests. Whether the spoken languages are diverse or have the potential to be universal or global depends on the dynamics of the period.

The development of language by animals could either motivate humans to speak one language in order to be different from animals or learn animal languages to better peer into their world. This kind of speculation is not far -fetched. It all comes down to evolution. Animals like dogs or chimpanzees might someday develop larger brains and be able to represent abstractions. Some animals do communicate using sounds and gestures. Of course, in the beginning, animal language would be rudimentary, but we, humans, went through the same process before our language became complex as we know it today. According to Scientific American, “In a study published in the journal PeerJ, for example, Oakland University psychology researcher Jennifer Vonk

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18 That may not have a unanimous welcome. We already share many traits with animal (humans and animals use energy, develop and grow, react and adapt to the environment, and reproduce); and what about pet lovers? Wouldn’t it be great if people could communicate directly and clearly with dogs or cats in the event one of these animal species develop language ability?
investigated how well four orangutans and a western lowland gorilla from the Toronto Zoo could pair photographs of animals from the same biological groups … Vonk presented the apes with a touch-screen computer and got them to tap an image of an animal—for instance, a snake—on the screen. Then she showed each ape two side-by-side animal pictures: one from the same category as the animal in the original image and one from another—for example, images of a different reptile and a bird. When they correctly matched animal pairs, they received a treat such as nuts or dried fruit. When they got it wrong, they saw a black screen before beginning the next trial. After hundreds of such trials, Vonk found that all five apes could categorize other animals better than expected by chance (although some individuals were better at it than others). The researchers were impressed that the apes could learn to classify mammals of vastly different visual characteristics together—such as turtles and snakes—suggesting the apes had developed concepts for reptiles and other categories of animals based on something other than shared physical traits … Dogs, too, seem to have better than expected abstract-thinking abilities. They can reliably recognize pictures of other dogs, regardless of breed, as a study in the July 2013 Animal Cognition showed. The results surprised scientists not only because dog breeds vary so widely in appearance but also because it had been unclear whether dogs could routinely identify fellow canines without the advantage of smell and other senses. Other studies have found feats of categorization by chimpanzees, bears and pigeons, adding up to a spate of recent research that suggests the ability to sort things abstractly is far more widespread than previously thought.”

We currently use brain size, imagination, tool making ability, and language ability as special features that distinguish us from animals. Should our language ability be matched by animals, a “universal human language” might emerge primarily for differentiation purposes, the same way we differentiate between the study of animal behavior, called ethology or comparative psychology, and the study of human behavior or psychology (or the same way we know what anthropology and zoology entail). While most humans are animal lovers, they wouldn’t want to share any characteristics with animal other than the biological ones that define life, which all living beings have. Therefore, we could form a linguistic coalition out of fear that our individual languages be associated to those of animals.

While many might find farfetched this idea of development of language ability by animals, it’s important to note that genetic evolution and mutation of genes are not Mankind’s apanage. Every living being is subject to evolution. Development of language by humans didn’t happen overnight. We went through a lengthy process before we could use language as we know it today. As I’m writing this book, many animals are already poised to develop language. For example, according to Robert Berwick et al. (2016), “We know that nonhuman animals excel at many challenging cognitive tasks. Corvids – birds like crows – are very smart in many cognitive domains. They have the ability to make tools, carry out sophisticated spatial and causal reasoning, and remember the locations and quality of cached food. Western scrub jays can lower strings tied around small pebbles into crevices to lure ant for lunch … While some birds like quails and chickens are not
vocal learners, songbirds are capable of quite sophisticated vocal learning. Male songbirds tutor the juveniles, who must learn the tutor’s song, sometimes with small modifications so that they can use their songs as territorial and sexual availability calls. As in humans, there is also left-brain lateralization. And as in humans, there is a critical period for learning halted at puberty by testosterone. With so many similarities, it’s not surprising that at least since the time of Aristotle, people have pondered whether birdsongs serve as a good model for language. However, given what we know now, the bottom line is that birdsong is only a model for speech, if that – not language.”

To accept a potential development of language by animals, we need to come to terms with the fact that there is a relationship between human language and animal communications systems, as sophisticated as human language may be, compared to that of animals. But, on what basis can one, for sure, state that animal communication systems are simple? Do humans fully understand how animals communicate? Don’t you think that for the deaf, sign language is more complex than spoken language? Don’t you think that when a deaf person sees two non-deaf people having quietly a conversation, he does not wish it was so simple for them? We cannot be sure of anything until we experience it ourselves. To come back to the comparison between spoken language and animal communication, I would like to reinforce the view that I previously made. Human language and animal communication systems are not unrelated. “The myth maintains that language is the preserve of humans, and humans alone. It cannot be compared to anything found amongst non-humans, and is unrelated to any non-human communicative capability. And the myth reinforces a view that there is an immense divide that separates human language from the communicative systems of other species. And more generally, it separates humans from all other species. But recent findings on the way other species communicate, from apes to whales, from vervets to starlings, increasingly suggest that such a view may overstate the divide that separates human language from non-human communicative systems. Indeed, many of the characteristics exhibited by human language are found, to varying degrees, across a broad spectrum of animal communication systems. In point of fact, we can learn more about human language, and what makes it special, by seeking to understand how it relates to and it derives from the communication systems of other species. This suggests that, although human language is qualitatively different, it is related to other non-human communication systems.” Evans (2014). This should not come as a surprise for phylogenetically19, we are all evolutionary cousins. Humans are just a branch of a single tree called the evolutionary tree. In the Universality of language and genetics section below, I explain how the mutation of the language gene (FOXP2) has helped humans develop tremendous language ability. Animal species also have genomes and are not impervious to natural selection.

19 Phylogenetics is the study of the relationships between organisms based on how closely they are related to each other.
Here, I don’t mean by natural selection the common belief of survival of the fittest. What I mean is that animals might also develop language ability due to the mutation of the gene(s) responsible for their current systems of communication. My explanation of animal natural selection, in linguistic terms, is summed up as a reproduction of change, meaning change that occurs following the reproduction of mutation and thanks to migration, two phenomena that are not solely the prerogatives of humans. Following a potential mutation of their language gene, animals can reproduce such a mutation and spread the latter by migrating, just like we did thousands of years ago. Gregarious animals and those that migrate in groups would be at the forefront of the animal linguistic evolution phenomenon.
3. INITIATIVES AIMING AT THE WORLD’S LINGUISTIC UNIFICATION

Thus far, the mechanism of language’s analysis has allowed us to understand how language, in the sense of speech is acquired and used mechanically and cognitively; and the analysis of the dynamism of language has allowed us to understand how language develops and evolves both in the sense of speech and linguistically speaking. The evolution of language, in a linguistic sense, has a lot to do with history and the exodus of populations, two factors that are dynamic and that have been around since the dawn of Humanity. That culminated to an astounding number of languages (about 7,000) that are spoken today around the world. At the same time, because of globalization, technology, and social networks, the world has become closer than ever before. The time is now appropriate to seek to institute a common language that would be spoken by everyone as a native language. Initiatives aiming to that end have been taken in the past and are being taken today. They are either active, voluntary or spontaneous, or passive or independent of our will.

Active initiatives

Under this category, I would like to regroup any efforts that have been made, associations, theories, groups or schools that have worked in the past or continue to work to this day for the advancement of universal linguistics and, thus, facilitate the emergence of a unique and global native language.

Translation of the Bible

Translation is not a modern times linguistic tool. The translation of the Bible is one of the first – if not the first – steps towards linguistic unification of the West. According to the International Bible Society, During the thousand years of its composition, almost the entire Old Testament was written in Hebrew, with some portions (notably in Daniel and Ezra) in Biblical Aramaic. The first translation was made by the Greeks. Gradually this Greek translation of the Old Testament, called the Septuagint, was widely accepted and was even used in many synagogues. The Septuagint refers to the seventy translators (seventy-two, in some versions) who were commissioned to translate the Bible at Alexandria, Egypt. Each translator worked in solitary confinement in his own cell, and according to legend all seventy versions proved identical. The Septuagint became the source text for later translations into many languages, including Latin, Coptic, Armenian and Georgian. Codex Sinaiticus or "Sinai Bible" is the original (handwritten) version of the New Testament. It is one of
the four great uncial\textsuperscript{20} codices, an ancient, handwritten copy of the Greek Bible. It was written in the middle of the fourth century and contains the earliest complete copy of the Christian New Testament. The hand-written text is in Greek. The New Testament appears in the original vernacular language (koine) and the Old Testament in the version, known as the Septuagint, which was adopted by early Greek-speaking Christians. In the Codex, the text of both the Septuagint and the New Testament has been heavily annotated by a series of early correctors. Thereafter, both the Septuagint and Codex Sinaiticus was translated in Latin by the Romans, Saint Jerome being the pioneer in that regard. Today, at least one book of Scripture has been translated for 2932 of these languages. The New Testament is available in 1,333 languages, with portions in 1045. The complete Bible has been translated into 553 languages.


Translation of the Qur’an

The Qur’an, originally written in Arabic language, has been, like the Bible, translated into most major African, Asian and European languages. However, unlike the translation of the Bible, it wasn’t easy for translators of the Qur’an to find a consensus for the simple reason that Muslims think that the Qur’an is an ideology that cannot be translated into any language by anybody for that matter, for fear that the message might be desecrated by doing so. To explain that, they allege that the message is best read in Quranic Arabic, which is, per se, quintessential and inseparable from the message itself. In the introduction of this book, I mentioned the Italian saying according to which: “Traduttore, traditore”, literally: “Translator, traitor” (To translate [something] is to betray [it]). It is fair to state that Muslim adepts take that saying one step further. They allege that because translations are made by humans, the message contained in the Qur’an might be “stained”. But, this is, I think, the subject for another book. Against all odds and to the displeasure of those against the translation of the Qu’ran, the latter, indeed, has been translated in an effort, similar to

\textsuperscript{20} Wikipedia tells us that Uncial is a majuscule script (written entirely in capital letters) commonly used from the 4th to 8th centuries AD by Latin and Greek scribes. U incial letters were used to write Greek, Latin, and Gothic.
that of the Bible’s translation, to democratize and internationalize the Qur’anic message and, thus, bring the world a little bit closer. This is why I found it necessary to also mention the translation of the Qu’ran as an initiative taken to the linguistic unification of our world.

Salman the Persian was the first to translate the Qur’an into the Persian language in the early 7th century. Then, Nicetas Byzantius translated it into Greek in the 8th - 9th A.D. It is important to note that these first two translations were unofficial or unattested. They will have to wait until the 10th - 12th centuries for an official version to materialize itself. The Samanid king, Mansur I (961–976) took the initiative by ordering the translation of the Qur’an by a group of selected scholars into Persian. In 1143, Robertus Ketenensis produced a Latin version of the Qur'an entitled *Lex Mahumet pseudoprophete* ("The law of Mahomet the false prophet"). From then on, the Qur’an has been translated in French, Spanish, Urdu, Bengali, Hindi, Turkish, Japanese, Chinese, and the major African languages such as Swahili, Harusa, Yoruba, and Dagbanli. Finally, in 1970, Professor Italo Chiussi translated the Quran into Esperanto, which is an artificial language, in fact, the most popular constructed language – also in an attempt to bring our world closer – as we will see it soon after the following section.

**Port Royal Grammar or Grammaire générale et raisonnée**

The Port Royal Grammar was an initiative based on the universality of grammar. The grammar – originally *Grammaire générale et raisonnée contenant les fondemens de l’art de parler, expliqués d’une manière claire et naturelle*, (English: “*General and Rational Grammar, containing the fundamentals of the art of speaking, explained in a clear and natural manner*”) – was a pioneering work in the philosophy of language. Published in 1660 by Antoine Arnauld and Claude Lancelot, it was the linguistic counterpart to the Port-Royal Logic (1662), both named after the Jansenist monastery of Port-Royal-des-Champs where their authors worked.

The Grammar was heavily influenced by the *Regulae* of René Descartes and it has been held up as an example par excellence of Cartesian linguistics by Noam Chomsky. The central argument of the Grammar is that grammar is simply mental processes, which are universal; therefore, grammar is universal. The ideas of this school of thought became widely known in the 1960s, when Noam Chomsky drew certain parallels between them and his own
conception of the relationship between language and mind. Although the main purpose of the grammar wasn’t the creation of a universal language, because it is based on the assumption that language and thought are linked, it can be applied as part of the initiatives aiming at the unification of the world at a linguistic level. Everywhere on the planet where languages are spoken, this pattern is ubiquitous: language follows thought.

### Esperanto

Esperanto is an artificial or a constructed language, meaning a language which has been invented to serve some particular purpose. Artificial languages include those which have been devised to facilitate international communication. Today, Esperanto is the most widely spoken constructed language in the world. Esperanto was created in the late 1870s and early 1880s by L. L. Zamenhof, a Polish-Jewish ophthalmologist from Białystok, then part of the Russian Empire. According to Zamenhof, he created the language to reduce the "time and labor we spend in learning foreign tongues" and to foster harmony between people from different countries: "Were there but an international language, all translations would be made into it alone ... and all nations would be united in a common brotherhood." About his goals Zamenhof wrote that he wants mankind to "learn and use", "en masse", "the proposed language as a living one". The goal for Esperanto to become a general world language was not the only goal of Zamenhof; he also wanted to "enable the learner to make direct use of his knowledge with persons of any nationality, whether the language be universally accepted or not; in other words, the language is to be directly a means of international communication."

Esperanto has not been a secondary official language of any recognized country, but it entered the education system of several countries such as Hungary and China. There were plans at the beginning of the 20th century to establish Neutral Moresnet as the world's first Esperanto state. In addition, the self-proclaimed artificial island micronation of Rose Island used Esperanto as its official language in 1968, and another micronation, the extant Republic of Molossia, uses Esperanto as an official language alongside English. The Chinese government has used Esperanto since 2001 for daily news on china.org.cn. China also uses Esperanto in China Radio International and for the internet magazine El Popola Ĉinio. The Vatican Radio has an Esperanto version of its website, and Google translate has recognized it.

The majority of Esperanto roots are based on Latin, though some vocabulary is taken from modern Romance languages, and from English, German, Polish and Russian.
3. Initiatives Aiming at the World’s Linguistic Unification

Active Initiatives

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**Esperanto Alphabet and Pronunciation, and Examples**

<table>
<thead>
<tr>
<th>Esperanto Alphabet</th>
<th>Pronunciation</th>
</tr>
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<tbody>
<tr>
<td>A a</td>
<td>[a]</td>
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<tr>
<td>B b</td>
<td>[b]</td>
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<tr>
<td>C c</td>
<td>[t]</td>
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<tr>
<td>Ĉ ĉ</td>
<td>[ĉ]</td>
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<td>D d</td>
<td>[d]</td>
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<td>E e</td>
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<td>F f</td>
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<td>G g</td>
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<td>Ĝ ĝ</td>
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<td>H h</td>
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<td>I i</td>
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<td>J j</td>
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<td>Ĝ ĝ</td>
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<td>K k</td>
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<td>L l</td>
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<td>M m</td>
<td>[m]</td>
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<td>N n</td>
<td>[n]</td>
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<td>O o</td>
<td>[o]</td>
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<td>P p</td>
<td>[p]</td>
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<td>R r</td>
<td>[r]</td>
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<td>S s</td>
<td>[s]</td>
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<tr>
<td>Ŝ š</td>
<td>[ŝ]</td>
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<td>T t</td>
<td>[t]</td>
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<tr>
<td>U u</td>
<td>[u]</td>
</tr>
<tr>
<td>Ū ū</td>
<td>[û]</td>
</tr>
<tr>
<td>V v</td>
<td>[v]</td>
</tr>
<tr>
<td>Z z</td>
<td>[z]</td>
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</tbody>
</table>

The alphabet has extra letters because L. L. Zamenhof, the creator of Esperanto, wanted to have a 1:1 letter-to-sound correspondence, which would give learners the ability to correctly pronounce every new word they see written and to correctly write down every new word they hear, without ambiguity. (In English, spelling is very ambiguous. Only context can tell whether /tu/ should be spelled "two", "to" or "too", for example.) You will find that this lack of ambiguity makes the learning much easier.

<table>
<thead>
<tr>
<th>Digit</th>
<th>Esperanto</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Nul</td>
</tr>
<tr>
<td>1</td>
<td>Unu</td>
</tr>
<tr>
<td>2</td>
<td>Du</td>
</tr>
<tr>
<td>3</td>
<td>Tri</td>
</tr>
<tr>
<td>4</td>
<td>Kvar</td>
</tr>
<tr>
<td>5</td>
<td>Kvin</td>
</tr>
<tr>
<td>6</td>
<td>Ses</td>
</tr>
<tr>
<td>7</td>
<td>Sep</td>
</tr>
<tr>
<td>8</td>
<td>Ok</td>
</tr>
<tr>
<td>9</td>
<td>Naŭ</td>
</tr>
</tbody>
</table>
**Exploiting the Possibilities for the Emergence of a Single and Global Native Language**, by Fritz Dufour, Linguist, MBA, DESS

What is special about Esperanto is the fact that “It has an alphabet of twenty-eight letters, in Latin script. About three-quarters of the words are derived from Romance languages; most of the remainder are based on Germanic languages. The phonology, or sound system, is fundamentally Slavic. The language is very simple. There is almost no distinction between masculine and feminine nouns. With some exceptions, common nouns used as subjects end in ‘-o’ (singular) or ‘-oj’ (plural), and adjectives modifying them end in ‘-a’ (singular) or ‘-aj’ (plural). Most adverbs end in ‘-e.’ Verbs are not adjusted for person or number: ‘I sing’ is mi kantas; ‘you sing,’ vi kantas; ‘they sing,’ ili kantas. Verb endings change with tense, but only once. No matter who sang or will sing—I, you, we, they—the verb is always kantis (past) or kantos (future).” *(The New Yorker, October 2016)*.

“The full name for Esperanto is *Doktoro Esperanto*. It translates to ‘one who hopes’ and is drawn from the pseudonym L.L. Zamenhoff, the creator of Esperanto, used when he published his first book on the language called *Unua Libro* in 1887.... All singular nouns in Esperanto end in o, all adjectives in a, all adverbs in e. This makes it simple to know what any element of a sentence represents, without having to know its exact meaning—part of what makes this language so easy to learn. For example, *hundo* means dog, *felica* means happy and *rapide* means quickly. The same rules apply to all nouns, adjectives and adverbs.... Studying Esperanto might help you learn another language more quickly. One study compared students who took four years of French with those who took one year of Esperanto and three years of French. The students who took Esperanto first, despite having fewer years of French instruction, were more fluent than those who had four years...
of instruction. This suggests that having a basic understanding of this language could be a real asset in mastering other European languages. Esperanto is the only language with no irregular verbs. French, by comparison has 2,238, Spanish and German about 700 each. Imagine not having to remember any irregular forms! Any student of language knows just how much easier this can make speaking a language. Also helping to make it easy to learn? Esperanto has no grammatical genders and all words are pronounced phonetically.... One of the first movies made in all Esperanto was called *Incubus*. This black and white film starred William Shatner in his pre-Star Trek days and featured cinematography by academy award-winner Conrad Hall. The film was done entirely in Esperanto and dubbing was not allowed to keep the other-worldly feeling created by the familiar but strange Esperanto. The film was lost for many years and was only found, restored and re-released in 2001. William Shatner was not a speaker of Esperanto, and his pronunciation of many of the words is off, a fact many Esperantists took note of.”

The *Esperanto World Congress* is an annual convention that has been held since 1905, except during World Wars I and II. Its translated in Esperanto to *Universala Kongreso de Esperanto*. Hundreds of participants from over 60 countries make it happen. The World Congress usually takes place in the last week of July or first week of August, beginning and ending on a Saturday, lasting a total of 8 days. Non-European countries which have participated include United States, Brazil, Canada, China, Cuba, South Korea, Australia, Israel, Vietnam and Argentina. The following table shows a timeline of the Esperanto movement:

<table>
<thead>
<tr>
<th>Esperanto Timeline (1859 – 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1859: Lazar Zamenhof, the creator of Esperanto, is born in Bialystok, Russia (now Poland).</td>
</tr>
<tr>
<td>• 1873: The Zamenhof family moves to Warsaw.</td>
</tr>
<tr>
<td>• 1878: Zamenhof celebrates the completion of his universal language project, Lingwe Uniwersala, with high-school friends.</td>
</tr>
<tr>
<td>• 1879: Zamenhof attends medical school in Moscow. His father burns his language project while he's away. Meanwhile Schleyer publishes a sketch of Volapük, the first constructed international auxiliary language to acquire a number of speakers. Many Volapük clubs will later switch to Esperanto.</td>
</tr>
<tr>
<td>• 1881: Zamenhof returns to Warsaw to continue medical school, and starts to recreate his project.</td>
</tr>
<tr>
<td>• 1887: Zamenhof marries, and with his wife's help publishes Unua Libro, the book introducing modern Esperanto.</td>
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<tr>
<td>• 1888: Leo Tolstoy becomes an early supporter.</td>
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<tr>
<td>• 1894: Zamenhof, reacting to pressure, puts a radical reform to a vote, but it is overwhelmingly rejected.</td>
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<tr>
<td>• 1901: Zamenhof publishes his ideas on a universal religion, based on the philosophy of Hillel the Elder.</td>
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<tr>
<td>• 1905: The first Universala Kongreso (World Congress) is held in Boulogne-sur-Mer, with 688 participants and conducted entirely in Esperanto. The Fundamento de Esperanto is published.</td>
</tr>
<tr>
<td>• 1907: Twelve members of the British parliament nominate Zamenhof for the Nobel Peace Prize. The Ĉekbanko Esperantista (Esperantist Checking Bank) is founded in London, using the spesmiolo, an auxiliary Esperanto currency based on the gold standard. A committee organised by Louis Couturat in Paris proposes the Ido reform project, which provides significant competition for Esperanto until the First World War.</td>
</tr>
<tr>
<td>• 1908: Universala Esperanto-Asocio, the Universal Esperanto Association, is founded by Hector Hodler, a 19-year-old Swiss Esperantist.</td>
</tr>
<tr>
<td>• 1909: The International Association of Esperantist Railway Workers is founded in Barcelona.</td>
</tr>
<tr>
<td>• 1910: 42 members of the French parliament nominate Zamenhof for the Nobel Peace Prize.</td>
</tr>
</tbody>
</table>
3. Initiatives Aiming at the World’s Linguistic Unification

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1917</td>
<td>Zamenhof dies during World War I.</td>
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<tr>
<td>1910s</td>
<td>Esperanto is taught in state schools in the Republic of China, Samos, and Macedonia. (Today it is part of the curriculum of China, Hungary, and Bulgaria.)</td>
</tr>
<tr>
<td>1920</td>
<td>The first Esperanto magazine for the blind, Aŭroro, begins publishing in Czechoslovakia. It's still in print today.</td>
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<tr>
<td>1921</td>
<td>The French Academy of the Sciences recommends using Esperanto for international scientific communication.</td>
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<tr>
<td>1922</td>
<td>Esperanto is banned from French schools. The French delegate to the League of Nations vetoes the use of Esperanto as its working language, leaving English and French.</td>
</tr>
<tr>
<td>1924</td>
<td>The League of Nations recommends that member states implement Esperanto as an auxiliary language.</td>
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<tr>
<td>1920s</td>
<td>Offices of the Brazilian Ministry of Education use Esperanto for their international correspondence. Lu Xun, the founder of modern Chinese literature, becomes a supporter of Esperanto. Montagu C. Butler is the first to raise Esperanto-speaking children.</td>
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<tr>
<td>1933/34</td>
<td>Reorganisation of the international (neutral) Esperanto movement, under the name UEA.</td>
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<tr>
<td>1934</td>
<td>Encyclopedia of Esperanto first published in Budapest.</td>
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<tr>
<td>1935</td>
<td>Kalocsay and Waringhien publish the influential Plena Gramatiko de Esperanto (Complete Grammar of Esperanto).</td>
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<tr>
<td>1936</td>
<td>All Esperanto organisations in Nazi Germany prohibited.</td>
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<td>1937</td>
<td>Leaders of the Esperanto organisation in the Soviet Union arrested; Esperanto activities made impossible.</td>
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<td>1938</td>
<td>The World Esperanto Youth Organisation TEJO is founded.</td>
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<tr>
<td>1939–1945</td>
<td>In World War II many countries are occupied by Germany and the Soviet Union, where Esperanto organisations often were prohibited or Esperanto activities were limited in other ways.</td>
</tr>
<tr>
<td>1948</td>
<td>The railway workers’ association is refounded as IFEF, the Internacia Fervojista Esperanto-Federacio (International Railway Workers’ Esperanto Federation) to foster the use of Esperanto in the administration of the railroads of the world (so far, of Eurasia).</td>
</tr>
<tr>
<td>1954</td>
<td>UNESCO establishes consultative relations with the Universal Esperanto Association.</td>
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<tr>
<td>1966</td>
<td>The precursor to Pasporta Servo is launched in Argentina. Pasporta Servo is a global network of Esperanto speakers who host Esperantists traveling through their countries.</td>
</tr>
<tr>
<td>1967</td>
<td>István Nemere founds the Renkontiĝo de Esperanto-Familioj, the first organisation for Esperanto-speaking families.</td>
</tr>
<tr>
<td>1975</td>
<td>The Esperanto movement spreads to Iran, with three thousand learning the language in Tehran.</td>
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<tr>
<td>1980</td>
<td>The Internacia Junulara Kongreso (International Youth Congress) in Rauma, Finland makes explicit the view of many in the Esperanto movement that Esperanto is a goal in itself.</td>
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<tr>
<td>1985</td>
<td>UNESCO encourages UN member states to add Esperanto to their school curricula.</td>
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<tr>
<td>1987</td>
<td>6000 Esperantists attend the 72nd Universala Kongreso in Warsaw to mark Esperanto's centennial.</td>
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<tr>
<td>1991</td>
<td>The first pan-African Esperanto Conference is held in Lomé, Togo.</td>
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<tr>
<td>1992</td>
<td>PEN International accepts an Esperanto section.</td>
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<tr>
<td>1999</td>
<td>The Esperanto poet William Auld is nominated for the Nobel Prize in Literature.</td>
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<tr>
<td>2001</td>
<td>The Wikipedio project (Esperanto Wikipedia) is launched, resulting in the first general encyclopedia written in a constructed language. It is now one of the most popular websites in Esperanto.</td>
</tr>
<tr>
<td>2004</td>
<td>The Europe - Democracy - Esperanto party (E°D°E°) contests the European Parliament elections in France, on a platform of making Esperanto the second language of all EU member states, taking 0.15% of the vote.</td>
</tr>
<tr>
<td>2007</td>
<td>The State of Israel issues a stamp to commemorate 120 years of Esperanto (1887–2007). An image of Zamenhof is designed in a text describing his life, reproduced from the Wikipedia article on Esperanto. The corner of the tab shows the flag of the Esperanto movement.</td>
</tr>
<tr>
<td>2009</td>
<td>The Senate of Brazil passed a bill which would make Esperanto an optional part of the curriculum in its state schools. As of 2010 the bill has not yet been passed by the Chamber of Deputies.</td>
</tr>
<tr>
<td>2015</td>
<td>The 100th Universala Kongreso (World Congress) is held in Lille, France.</td>
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</table>
Interlingua or Latino Sine Flexione and other artificial languages

Interlingua is an artificial interlanguage that is based on the linguistic elements common to English and the chief Romance languages and is promoted by the International Auxiliary Language Association. It comes from Italian and Latin *inter* = between, and *lingua* = language. The language developed between 1924 and 1951, based mainly on the Romance languages and intended as a medium of international communication among scientists. “Also called Latino Sine Flexione, simplified form of Latin intended for use as an international second language. Interlingua was originally developed in 1903 by the Italian mathematician Giuseppe Peano, but lack of clarity as to what parts of Latin were to be retained and what were to be discarded led to numerous “dialects” of Interlingua, confusion, and its dying out among enthusiasts. In the late 1940s and early 1950s, the linguist Alexander Gode, with the sponsorship of the International Auxiliary Language Association, reformulated and revived Interlingua and promoted its use in the international scientific community. As reformulated, Interlingua’s grammar is not much more complex than that of Esperanto; it has only one form for nouns (taken from the Latin ablative case), no gender, no case, plurals in -s, one form for adjectives with no noun-adjective agreement, one definite article, and verbs with no inflection for person or number. Abstracts and summaries are published in Interlingua by several international scientific journals, but in general the language has not been widely adopted.”

In “*Interlingua: A grammar of the international language*”, Alexander Gode states that “Interlingua has been developed to omit any grammatical feature that is absent from any one primary control language. Thus, Interlingua has no noun–adjective agreement by gender, case, or number (cf. Spanish and Portuguese gatas negras or Italian gatte nere, 'black female cats'), because this is absent from English, and it has no progressive verb tenses (English I am reading), because they are absent from French. Conversely, Interlingua distinguishes singular nouns from plural nouns because all the control languages do. With respect to the secondary control languages, Interlingua has articles, unlike Russian … Word order is subject–verb–object, except that a direct object pronoun or reflexive pronoun comes before the verb (Io les vide, 'I see them'). Adjectives may precede or follow the nouns they modify, but they most often follow it. The position of adverbs is flexible, though constrained by common sense.” Leland Yeager, for his part, thinks that “The grammar of Interlingua has been described as similar to that of the Romance languages, but greatly simplified, primarily under the influence of English. More recently, Interlingua's grammar has been likened to the simple grammars of Japanese and particularly Chinese.”
In addition to Esperanto and Interlingua, there are other constructed languages (even less popular) that were conceived for specific purposes and in particular settings. However, they all are indications that human beings wish, in their inner self, they could all speak a single language. The following languages deserved to be at least recognized as initiatives taken in order to make our world linguistically smaller and closer:

- **Dothraki language**: The Dothraki language is a constructed fictional language in George R. R. Martin's fantasy novel series A Song of Ice and Fire and its television adaptation Game of Thrones, where it is spoken by the Dothraki, nomadic inhabitants of the Dothraki Sea. The language was developed for the TV series by the linguist David J. Peterson based on the Dothraki words and phrases in Martin's novels. As of September 2011, the language comprised 3163 words, not all of which have been made public. In 2012, 146 newborn girls in the United States were named "Khaleesi", the Dothraki term for the wife of a khal or ruler, and the title adopted in the series by Daenerys Targaryen. The Dothraki vocabulary was created by David J. Peterson well in advance of the adaptation. HBO hired the Language Creation Society to create the language, and after an application process involving over thirty conlangers, David Peterson was chosen to develop the Dothraki language. He delivered over 1700 words to HBO before the initial shooting. Peterson drew inspiration from George R. R. Martin’s description of the language, as well as from such languages as Turkish, Russian, Estonian, Inuktitut and Swahili. David J. Peterson and his development of the Dothraki language were featured on an April 8, 2012 episode of CNN’s The Next List. He went on to create the Valyrian languages for season 3 of Game of Thrones. Peterson and his development of Dothraki were also featured on the January 8, 2017 episode of To Tell the Truth.

- **Na’vi language**: The Na’vi language (Na’vi: Lì’fya leNa’vi) is the constructed language of the Na’vi, the sapient humanoid indigenous inhabitants of the fictional moon Pandora in the 2009 film Avatar. It was created by Paul Frommer, a professor at the USC Marshall School of Business with a doctorate in linguistics. Na’vi was designed to fit James Cameron's conception of what the language should sound like in the film, to be realistically learnable by the fictional human characters of the film, and to be pronounceable by the actors, but to not closely resemble any single human language. When the film was released in 2009, Na’vi had a growing vocabulary of about a thousand words, but understanding of its grammar was limited to the language's creator. However, this has changed subsequently as Frommer has expanded the lexicon to more than 2200 words and has published the grammar, thus making Na’vi a relatively complete, learnable and serviceable language.

- **Klingon language**: The Klingon language is the constructed language spoken by the fictional Klingons in the Star Trek universe. Described in the 1985 book The Klingon

\[\text{Footnote:} \text{Conlanging is the creation of constructed languages or conlangs, such as Esperanto, Lojban, or Klingon. A conlanger is someone who creates or constructs conlangs.}\]
Dictionary by Marc Okrand and deliberately designed to sound "alien", it has a number of typologically uncommon features. The language's basic sound, along with a few words, was first devised by actor James Doohan ("Scotty") and producer Jon Povill for Star Trek: The Motion Picture. That film marked the first time the language had been heard on screen. In all previous appearances, Klingons spoke in English. Klingon was subsequently developed by Okrand into a full-fledged language.

- *Elvish languages*: Elvish languages are constructed languages used by Elves in a fantasy setting. Author J. R. R. Tolkien created many languages for his Elves, which eventuated in the creation of a mythology (expounded in his books), complete with races, to speak the languages he had constructed. The language has quickly spread among modern day use, resulting in Quenya and Sindarin to become legally stated languages. His interest was primarily philological, and he said his stories grew out of his languages. The languages were the first thing Tolkien created for his mythos, starting with what he originally called "Qenya", the first primitive form of Elvish. This was later called Quenya (High-elven) and is one of the two most complete of Tolkien's languages (the other being Sindarin, or Grey-elven). The phonology and grammar of Quenya are strongly influenced by Finnish, Latin, Greek and elements of ancient Germanic languages, and Sindarin being strongly influenced by Welsh.

**Sign language**

For starters, let’s not forget that when people communicate thanks to signs, well, they “*sign*”, while they “*talk*” or “*speak*” when they use oral sounds to communicate. “Sign language is any means of communication through bodily movements, especially of the hands and arms, used when spoken communication is impossible or not desirable. The practice is probably older than speech. Sign language may be as coarsely expressed as mere grimaces, shrugs, or pointings; or it may employ a delicately nuanced combination of coded manual signals reinforced by facial expression and perhaps augmented by words spelled out in a manual alphabet. Wherever vocal communication is impossible, as between speakers of mutually unintelligible languages or when one or more would-be communicators is deaf, sign language can be used to bridge the gap.” (Britannica).

Sign languages are different from spoken languages in that they have different properties, the most notable one being movement or gestures executed by body parts other than the mouth, the tongue, and the lungs. Though it may seem paradoxical (because sign languages are not representations of spoken languages), I consider sign languages as an initiative aiming at the linguistic unification of
the world because it is evidence of language universals. For example, I explained how babies first babble before they can pronounce intelligible words by the time they are 12-18 months old. Deaf children exposed to sign languages go through the same stages of language acquisition as hearing babies. They babble with their hands. Signed languages are organized in the brain just like spoken languages are. A bridge between sign language and spoken language can be illustrated by the fact that “Chinese and Japanese, whose languages use the same body of characters but pronounce them entirely differently, can communicate by means of a sign language in which one watches while the other traces mutually understood characters in his or her palm.” Another example is that “members of religious orders who have taken vows of silence, as well as others who for reasons of piety or humility have forsown speech, have need of sign language. Often, in a silent monastic order, for instance, natural gestures such as passing food or pointing to some needed object have sufficed for effective communication, leaving little need for specially coded signs. Meher Baba, an Indian religious figure, abstained from speech in the last decades of his life but “dictated” voluminous writings to disciples, at first by pointing to letters on an English-language alphabet board; but, after evolving a suitable sign language of gestures, he relied on that alone. The medieval English cleric Venerable Bede worked out a coded sign language based on manual signs representing numbers, with the numbers in turn signifying letters of the Latin alphabet in sequence—i.e., 1 for A, 7 for G, etc. It is not known, however, whether he devised the system to communicate with the deaf or merely to maintain silence.” (Britannica)

American Sign Language (ASL) is a complete, complex language that employs signs made by moving the hands combined with facial expressions and postures of the body. It is the primary language of many North Americans who are deaf and is one of several communication options used by people who are deaf or hard-of-hearing. According to the National Institute of Deafness and Other Communication Disorders (NIDCD), “the exact beginnings of ASL are not clear, but some suggest that it arose more than 200 years ago from the intermixing of local sign languages and French Sign Language (LSF, or Langue des Signes Française), which makes sign language older than Esperanto, Interlingua, and the International Phonetics Association (IPA) … It was long thought in many cultures that the deaf were uneducable, and the few teachers willing to try were available only to the wealthy. In the mid-18th century, however, the first educator of poor deaf children, Charles-Michel, abbé de l’Epée, developed a system for spelling out French words with a
manual alphabet and expressing whole concepts with simple signs. From l’Épée’s system developed French Sign Language (FSL), still in use in France today and the precursor of American Sign Language (ASL) and many other national sign languages.”

Today’s ASL includes some elements of LSF plus the original local sign languages, which over the years have melded and changed into a rich, complex, and mature language. Modern ASL and modern LSF are distinct languages and, while they still contain some similar signs, can no longer be understood by each other’s users ... In spoken language, words are produced by using the mouth and voice to make sounds. But for people who are deaf (particularly those who are profoundly deaf), the sounds of speech are often not heard, and only a fraction of speech sounds can be seen on the lips. Sign languages are based on the idea that vision is the most useful tool a deaf person has to communicate and receive information ... ASL is a language completely separate and distinct from English. It contains all the fundamental features of language—it has its own rules for pronunciation, word order, and complex grammar. While every language has ways of signaling different functions, such as asking a question rather than making a statement, languages differ in how this is done. For example, English speakers ask a question by raising the pitch of their voice; ASL users ask a question by raising their eyebrows, widening their eyes, and tilting their bodies forward ... Just as with other languages, specific ways of expressing ideas in ASL vary as much as ASL users do. In addition to individual differences in expression, ASL has regional accents and dialects. Just as certain English words are spoken differently in different parts of the country, ASL has regional variations in the rhythm of signing, form, and pronunciation. Ethnicity and age are a few more factors that affect ASL usage and contribute to its variety.”

As to how most children learn ASL, they tell us that parents are often the source of a child’s early acquisition of language, but for children who are deaf, additional people may be models for language acquisition. A deaf child born to parents who are deaf and who already use ASL will begin to acquire ASL as naturally as a hearing child picks up spoken language from hearing parents. However, for a deaf child with hearing parents who have no prior experience with ASL, language may be acquired differently. In fact, nine out of 10 children who are born deaf are born to parents who hear. Some hearing parents choose to introduce sign language to their deaf children. Hearing parents who choose to learn sign language often learn it along with their child. Surprisingly, children who are deaf can learn to sign quite fluently from their parents, even when their parents might not be perfectly fluent themselves. Sign language is important especially in early childhood. Baby Sign Language lets babies, as young as six months old, communicate their needs so they don't need to cry. A deaf baby can learn how to tell his parents when he is hungry, wants more, or ... if he is too cold or too hot, or that he just needs a hug.

Before I end the discussion on sign languages, I would like to point out the fact that although sign languages do not generally depend on spoken languages, new studies suggest some relationship. For example, a study led by Northeastern University College of Science, “How human brains do
language: One system, two channels”, brings out the debate as to what role sign language has played in language evolution, and whether the structure of sign language share similarities with spoken language. The research shows that our brain detects some deep similarities between speech and sign language. “Language is not simply about hearing sounds or moving our mouths. When our brain is ‘doing language,’ it projects abstract structure. The modality (speech or sign) is secondary. ‘There is a misconception in the general public that sign language is not really a language,’ said Berent. ‘Part of our mandate, through the support of the NSF, is to reveal the complex structure of sign language, and in so doing, disabuse the public of this notion.’” Science Daily reported the experiment as follows:

<table>
<thead>
<tr>
<th>Relationship between sign language and spoken language - The experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>To come to this conclusion, Berent's lab studied words (and signs) that shared the same general structure. She found that people reacted to this structure in the same way, irrespective of whether they were presented with speech or signs.</td>
</tr>
</tbody>
</table>

In the study, Berent studied words and signs with doubling (e.g., slaflaf) -- ones that show full or partial repetition. She found that responses to these forms shift, depending on their linguistic context.

When a word is presented by itself (or as a name for just one object), people avoid doubling. For example, they rate slaflaf (with doubling) worse than slafmak (with no doubling). But when doubling signaled a systematic change in meaning (e.g., slaf=singular, slaflaf=plural), participants now preferred it.

Next, Berent asked what happens when people see doubling in signs (signs with two identical syllables). The subjects were English speakers who had no knowledge of a sign language. To Berent's surprise, these subjects responded to signs in the same way they responded to the words. They disliked doubling for singular objects, but they systematically preferred it if (and only if) doubling signaled plurality. Hebrew speakers showed this preference when doubling signaled a diminutive, in line with the structure of their language. "It's not about the stimulus, it's really about the mind, and specifically about the language system," said Berent. "These results suggest that our knowledge of language is abstract and amodal. Human brains can grasp the structure of language regardless of whether it is presented in speech or in sign."

The bottom line is: language is language. Science Daily presented a review of the study in these terms: “Currently there is a debate as to what role sign language has played in language evolution, and whether the structure of sign language share similarities with spoken language. Berent's lab shows that our brain detects some deep similarities between speech and sign language. This allows for English speakers, for example, to extend their knowledge of language to sign language. ‘Sign language has a structure, and even if you examine it at the phonological level, where you would expect it to be completely different from spoken language, you can still find similarities. What's even more remarkable is that our brain can extract some of this structure even when we have no knowledge of sign language. We can apply some of the rules of our spoken language phonology to signs,’ said Berent … Berent says these findings show that our brains are built to deal with very different types of linguistic inputs. The results from this paper confirm what some scientists have
long thought, but hasn't truly been grasped by the general public -- language is language no matter what format it takes. ‘This is a significant finding for the deaf community because sign language is their legacy. It defines their identity, and we should all recognize its value. It's also significant to our human identity, generally, because language is what defines us as a species.’ … To help further support these findings, Berent and her lab intend to examine how these rules apply to other languages. The present study focused on English and Hebrew.”

International Phonetic Association (IPA)

The IPA is an organization founded in 1886 by a group of European phoneticians (Paul Passy, 1859–1940, and others) to promote the study of phonetics. In 1889, it published the International Phonetic Alphabet (also IPA) which, in modified and expanded form, is today the most widely used system for transcribing the sounds of a language. According to Michael MacMahon, “Since its creation, the IPA has undergone a number of revisions. After major revisions and expansions in 1900 and 1932, the IPA remained unchanged until the International Phonetic Association Kiel Convention in 1989. A minor revision took place in 1993 with the addition of four letters for mid central vowels ... Apart from the addition and removal of symbols, changes to the IPA have consisted largely of renaming symbols and categories and in modifying typefaces.” Pullum and Ladusaw think that this was also aimed at the removal of letters for voiceless implosives.

The International Phonetic Alphabet chart for English dialects provides the following description in terms of structure:

The general principle of the IPA is to provide one letter for each distinctive sound (speech segment), although this practice is not followed if the sound itself is complex. This means that:

- It does not normally use combinations of letters to represent single sounds, the way English does with ⟨sh⟩, ⟨th⟩ and ⟨ng⟩, or single letters to represent multiple sounds the way ⟨x⟩ represents /ks/ or /gz/ in English.
- There are no letters that have context-dependent sound values, as do "hard" and "soft" ⟨c⟩ or ⟨g⟩ in several European languages.
- Finally, the IPA does not usually have separate letters for two sounds if no known language makes a distinction between them, a property known as "selectiveness".

Among the symbols of the IPA, 107 letters represent consonants and vowels, 31 diacritics are used to modify these, and 19 additional signs indicate suprasegmental qualities such as length, tone, stress, and intonation. These are organized into a chart; the chart displayed here is the official chart as posted at the website of the IPA.
THE INTERNATIONAL PHONETIC ALPHABET (revised to 2015)

CONSONANTS (PULMONIC) © 2015 IPA

<table>
<thead>
<tr>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Postalveolar</th>
<th>Retroflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Uvular</th>
<th>Pharyngeal</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>t</td>
<td>d</td>
<td>c</td>
<td>f</td>
<td>j</td>
<td>k</td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>Tgl</td>
<td>b</td>
<td>r</td>
<td>t</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tap or Flap</td>
<td>v</td>
<td>r</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>φ β θ f v</td>
<td>θ ó</td>
<td>s z</td>
<td>j s z</td>
<td>c j</td>
<td>x y</td>
<td>χ s</td>
<td>h</td>
<td>h h</td>
<td></td>
</tr>
<tr>
<td>Lateral, approximant</td>
<td>u</td>
<td>j</td>
<td>l j</td>
<td>j w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symptoms to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

<table>
<thead>
<tr>
<th>Stops</th>
<th>Voiced implosive</th>
<th>Implosive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilabial</td>
<td>b</td>
<td>r</td>
</tr>
<tr>
<td>Dentals</td>
<td>d</td>
<td>t</td>
</tr>
<tr>
<td>Palatal</td>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>Alveolar</td>
<td>m</td>
<td>n</td>
</tr>
</tbody>
</table>

VOWELS

<table>
<thead>
<tr>
<th>Close Front</th>
<th>Central</th>
<th>Close-Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>i y</td>
<td>i u</td>
<td>u w u</td>
</tr>
<tr>
<td>Close-Back</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e o e</td>
<td>e ø e</td>
<td>y o y</td>
</tr>
<tr>
<td>Open-Mid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e o e</td>
<td>e ø e</td>
<td>y o y</td>
</tr>
<tr>
<td>Open</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e o e</td>
<td>e ø e</td>
<td>y o y</td>
</tr>
</tbody>
</table>

Suprasegmentals

- Primary stress
- Secondary stress
- Long e:
- Half-long e'
- Extra-short e
- Minor (foot) group
- Major (intonation) group
- Syllable break: i.n.t.e.k
- Linking (absence of a break)

Tones and Word Accents

<table>
<thead>
<tr>
<th>Level</th>
<th>Contour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra high</td>
<td>Extra high</td>
</tr>
<tr>
<td>High</td>
<td>Falling</td>
</tr>
<tr>
<td>High rising</td>
<td>High rising</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Extra low</td>
<td>Extra low</td>
</tr>
<tr>
<td>Lowest</td>
<td>Falling</td>
</tr>
<tr>
<td>Demisemive</td>
<td>Global rise</td>
</tr>
<tr>
<td>U-step</td>
<td>Global fall</td>
</tr>
</tbody>
</table>
Finally, it’s important to note that the IPA has a journal called *Journal of The International Phonetic Association*. The organization describes it as follows: “The Journal of the International Phonetic Association is a peer-reviewed academic journal that appears three times a year. It is published by Cambridge University Press on behalf of the International Phonetic Association. It was established as Le Maître Phonétique in 1886 and obtained its current name in 1971. It covers topics in phonetics and applied phonetics such as speech therapy and voice recognition. The editor-in-chief is Adrian P. Simpson (Friedrich-Schiller-Universität). The journal is abstracted and indexed in the MLA Bibliography.”

**The Prague School of Linguistics**

It's the name given to the views and methods of the Linguistic Circle of Prague and the scholars it influenced. The circle was founded in 1926 by Vilém Mathesius (1882–1946), a professor of English at Caroline University, and included such linguists as Roman Jakobson and Nikolai Trubetskoy (1890–1938). The ‘Praguean’ influence has been widespread and long-lasting. Its main emphasis lay on the analysis of language as a system of functionally related units, an emphasis which showed Saussurean influence. In particular, it led to the distinction between the phonetic and the phonological analysis of sounds, the analysis of the phoneme into distinctive features, and such associated notions as binarity, marking and morphophonemics. Linguists of the Prague school stress the function of elements within language, the contrast of language elements to one another, and the total pattern or system formed by these contrasts, and they have distinguished themselves in the study of sound systems.

The main goal of the school was not to create a universal language. However, its consideration when analyzing the universal nature of language can be explained by the fact that they developed distinctive-feature analysis of sounds; by this analysis, each distinctive sound in a language is seen as composed of a number of contrasting articulatory and acoustic features, and any two sounds of a language that are perceived as being distinct will have at least one feature contrast in their compositions. Since the 1950s, Prague School ideas have been received and developed, particularly with reference to the syntax, semantics and stylistics of English and Slavonic languages, and illustrated in the work of Josef Vachek (1909–96), Jan Firbas (1921–2000) and others. Of particular note here, is the formulation of a theory of functional sentence perspective, wherein sentence analysis is seen as a complex of functionally contrastive constituents. Their theory is one of the pioneer research in universal linguistic theories. Their contributions – especially in terms of phonology – to the study of language are significant.
Language planning or language engineering

Language planning is a term used in sociolinguistics for a deliberate, systematic and theory-based attempt to solve the communication problems of a community by studying its various languages and dialects, and developing an official language policy concerning their selection and use; It is often referred to as language engineering and sometimes as language treatment and involve corpus planning and status planning. Corpus planning deals with the way language norms are chosen and codified, as when a variety is selected to be a national language, a spelling system is reformed, campaigns for plain or non-sexist language are launched, and literacy programs are introduced. It contrasts with status planning, which deals with the standing of one language in relation to others. Status planning is thus more concerned with the social and political implications of choosing a language, and with such matters as language attitudes, national identity, international use, and minority rights. For example, the relative standing of French and English in Canada, and such matters as the law governing their use in official documents, is a matter of status planning; the choice of which variety of French is to be taught as a standard in Canadian 268 language minority schools, and the provision of relevant teaching materials, is a matter of corpus planning. Language planning is not always conducted by governments, as opposed to language regulation. Non-governmental entities can also impact language acquisition. Organizations such as the Académie française of France, the Real Academia Española of Spain, or the Rat für deutsche Rechtschreibung of Germany can effectively plan and implement changes for the French, the Spanish, and the German languages respectively.

As I stated above, French people didn’t always speak a standard, national or universal French. Before the Renaissance, it was acceptable and expected to meet people who spoke different types of French from regions to regions within continental France. A universal or national French language started to develop when authors like François de Malherbe and Jean-Baptiste Poquelin, also known as Molière, restructured and refocused the use of the French language through literature. This language planning through literature and the Académie française set French apart from the other Romance languages. That prompted the French aristocracy to define pure French as the language spoken by the Royal Court and scholars alike, who worked towards setting the French language as different as possible from its Latin ancestor and break ties with all remnants of the Roman Empire. In a study by linguist Mario Pei (1949), the degrees of evolution of the Romance languages with respect to the ancestral Latin were found to be as follows:

- Sardinian: 8%;
- Italian: 12%;
3. Initiatives Aiming at the World’s Linguistic Unification

- Spanish: 20%
- Romanian: 23.5%
- Occitan: 25%
- Portuguese: 31%
- French: 44%

“Pei, Mario A. demonstrates a comparative statistical method for determining the extent of change from the Latin for the free and checked accented vowels of French, Spanish, Italian, Portuguese, Rumanian, Old Provençal, and Logudorese Sardinian. By assigning 3½ change points per vowel (with 2 points for diphthongization, 1 point for modification in vowel quantity, ½ point for changes due to nasalization, palatalization or umlaut, and −½ point for failure to effect a normal change), there is a maximum of 77 change points for free and checked stressed vowel sounds (11×2×3½=77). According to this system, the percentage of change is greatest in French (44%) and least in Italian (12%) and Sardinian (8%). Prof. Pei suggests that this statistical method be extended not only to all other phonological, but also to all morphological and syntactical, phenomena.”

French is the only Romance language which does not use stressed accents, for example. A stressed accent is the elevation of the intonation of either the first, the second, or the third syllable. Example: in the Spanish word teléfono, the second syllable is pronounced with a higher intonation. The accents used in French are different kinds of accents. They are called diacritic accents or signs placed on a vowel to indicate either how to pronounce it or to allow you to find the context and has nothing to do with raising or lowering the intonations. These signs are especially helpful in reading and writing. For example, ç followed by a vowel is pronounced like a dental (like s), but without the cedilla, it’s pronounced like a guttural (like k). Acoustically, there is no difference between the grave accent and the circumflex accent: a, â, and à are pronounced the same way; so are ê and ë, i and î, o and ô, u and û but the right spelling is important in reading and writing. It’s important to note the accent on ë and î are called trema. This so-called trema is used to indicate that the vowel is pronounced separately, as in Noël (Christmas) and maïs (pronounced mah yis = corn). Also, as opposed to English and many other languages, there are no diphthongs in French. A diphthong is a sound formed by the combination of two vowels in a single syllable, in which the sound begins as one vowel and moves toward another (as in coin, loud, and side). All French syllables are monothongs. These characteristics of the French language shows that it’s possible that language planning may favor the invention of new languages.
Globalization and its linguistic advantages

Normally, globalization means an international network of social and economic system, but it does have an impact on the way we communicate and, therefore on spoken languages. Marshall McLuhan even speaks of global village when he considers how technology has brought the world together. Technology has changed the way we communicate. The Internet can be viewed as a big virtual metropolis where language barriers are becoming less and less relevant among people who don’t speak the same languages. Almost all webpages can be automatically translated, so can messages that are posted on social networks such as Facebook, which, by the way, has more people than China as of 2017. You may be monolingual and still be able to read your friends’ posts from around the world thanks to automatic translation. For the first time in the history of Mankind, communicating over long distances and instantly with speakers of different languages has become possible.

Net-speak or Internet jargon is referred to as the jargon, abbreviations, and emoticons and emojis typically used by frequent internet users. Emojis have become increasingly popular. There is even a World Emoji Day (July 17 of each year). An Emoji movie was released on July 28, 2017. Although emojis have been around for some time, especially among teens, they have developed into a culture - the emoji culture - within the global mainstream. On November 16, 2015, Oxford Dictionaries made history by announcing that their "Word of the Year" would not be one of those old-fashioned, string-of-letters-type words at all, but an emoji. Oxford University Press—which publishes both the august Oxford English Dictionary and the lower-brow, more-modern Oxford Dictionaries Online—partnered with keyboard-app company SwiftKey to determine which emoji was getting the most play this past year. According to their data, the "Face With Tears of Joy" emoji, also known as LOL Emoji or Laughing Emoji, comprised nearly 20% of all emoji use in the U.S. and the U.K., where Oxford is based. The idea behind emojis is that they can sometimes transcend linguistic barriers by providing us with a universally understood means of communication even when we don’t share the same languages. Emojis aren't an American concept. They were conceived back in the late 1990's by Shigetaka Kurita, an employee at the Japanese telecom company NTT Docomo. Also, translation technology improvement is on the fast track. Google, for instance has integrated artificial intelligence in its Google translate application, making it look more and more like a universal translator. Speaking of virtual translator, Logbar, a Japanese company, has made a portable voice translation device for travelers, making traveling much easier and breaking potential
language barriers. The way it works is you speak directly to the translator, and it translates aloud what you say so that your interlocutor can hear the translation. Once he/she responds, the machines translate the response for you in your native language.

In addition to these voluntary steps to bring our world closer together linguistically speaking, there are other phenomena that are taking place, but aren’t dependent upon our will. I call them passive or spontaneous initiatives, which sound a little bit paradoxical, because normally an initiative is the ability to assess and initiate things independently or the power or opportunity to act or take charge before others do. These passive initiatives, although we have no control over them, take place precisely because we exist. Speakers make languages. Without speakers, no spoken language can exist. So, we passively watch these things occur, but they occur because of our existence as speakers. That is what I mean by passive initiatives. They are spontaneous because they are not imposed by any established authority.

Passive initiatives

I would like to focus on the following phenomena because I think they are the most important in terms of spontaneous, non-authoritarian initiatives: language change, language contact, the universal language of science, and the universality of language and genetics.

Language change

In the context of evolution of language (see above), I spoke about how and why languages change. Yes, language can change because of deliberate attempts by speakers to change their language, for example in the case of the British Received Pronunciation (RP). But, by and large, the change is passive and unintentional. Here, I would like to look at it from that different angle, that is, by considering factors that are totally independent of our will. Let me first reiterate the definition of language change: “it refers to variations that occur over time in a spoken language in terms of phonetics, morphology, semantic, and syntax.” That said, let’s consider the unintentional change. Languages change in a continuous manner, meaning that the language you speak today has been changing way before you were born and will continue to do so way after you die. Say you come back to life after 300 to 400 years after your death, it will be impossible for you to understand what you used to call your native language. This can be illustrated by pidgin, creole, and the creolization process. A Pidgin is not a natural language, but only a crude system of communication stitched together by people who have no language in common. If a pidgin establishes itself in a multilingual context, it will change in a similar manner to the way languages change.
society, then there may well come a time when a generation of children is produced who have only the pidgin to use among themselves. In this case, the children will almost inevitably take the pidgin and turn it into a real language, complete with a large vocabulary and a rich grammatical system. This new natural language is a creole, and the children who create it are the first native speakers of the creole. In other words, a creole language is always preceded by a pidgin. The process of turning a pidgin into a creole is called creolization. “Creolization occurs only when a pidgin for some reason becomes the variety of language that children must use in situations in which use of a ‘full’ language is effectively denied them. A creole is the native language of some of its speakers. We can see how this must have happened in Haiti when French was effectively denied to the masses and the African languages brought by the slaves fell into disuse. We can also see how, while many of the guest workers in Germany developed pidginized varieties of German to communicate when necessary with one another, their children did not creolize these varieties but, with varying success, acquired Standard German, since they had to go to school and be educated in German. A full language was available to them, so they had no need to creolize Gastarbeiter Deutsch.” Another important mechanism of language change and that is independent of each individual speaker is relexification, which is the mechanism of language change by which one language replaces much or all of its lexicon, including basic vocabulary, with that of another language, without drastic change to its grammar. It is principally used to describe pidgins, creoles, and mixed languages.

Languages change also because of the way our brain processes thought. For example, when two people are having a conversation in a common language, they are actually speaking different languages because they each have a different idiolect. Their voiceprints are different. They understand each other because their respective brains are able to convert the sounds they hear into representations, which is a common denominator to all languages. That is, thanks to languages, humans have the extraordinary ability to represent things that are not there, not tangible. Languages allow us to situate various events in time. In case the vocal sounds are unfamiliar to
them, their brains either misrepresents them or just become powerless. That happens when someone is confronted with a slight, mild, or a strong foreign accent. This can also be explained by what is called a malapropism. Also called a malaprop or Dogberryism, it is the use of an incorrect word in place of a word with a similar sound, resulting in a nonsensical, often humorous utterance. An example is this statement by baseball player Yogi Berra: "Texas has a lot of electrical votes," rather than "electoral votes." Malapropisms also occur as errors in natural speech and are often the subject of media attention, especially when made by politicians or other prominent individuals. The philosopher Donald Davidson has noted that malapropisms show the complex process through which the brain translates thoughts into language. Other examples include eggcorn and mondegreen.

In linguistics, an eggcorn is an idiosyncratic substitution of a word or phrase for a word or words that sound similar or identical in the speaker's dialect (sometimes called oronyms). The new phrase introduces a meaning that is different from the original, but plausible in the same context, such as "old-timers' disease" for "Alzheimer's disease". Classical malapropisms generally derive their comic effect from the fault of the user, while eggcorns are errors that exhibit creativity or logic. Eggcorns often involve replacing an unfamiliar, archaic, or obscure word with a more common or modern word ("baited breath" for "bated breath"). The term eggcorn was coined by a professor of linguistics, Geoffrey Pullum, in September 2003 in response to an article by Mark Liberman on the website Language Log, a blog for linguists. Liberman discussed the case of a woman who substitutes the phrase egg corn for the word acorn, and argued that the precise phenomenon lacked a name. Pullum suggested using "eggcorn" itself as a label for the class of error. The phenomenon is very similar to the form of wordplay known as the pun, except that, by definition, the speaker (or writer) intends the pun to have some humorous effect on the recipient, whereas one who speaks or writes an eggcorn is unaware of the mistake.

Finally, mondegreen is a misinterpretation of a word or phrase that has been heard, especially a song lyric. The word mondegreen is itself a mondegreen. The term was coined by American writer Sylvia Wright in a 1954 article for Harper's in which she explained that as a child, she'd misinterpreted a line of a Scottish ballad; instead of “And laid him on the green” she heard “And Lady Mondegreen.” This is to say that current speakers are forced to used terms resulting from someone else’s misinterpretation, but still those terms have become part of their language. Such occurrences are passive and independent of our will as modern speakers. These passive phenomena may become prevalent at the international level and propitious to the emergence of a common language if the language in which they are happening is tethered to a very influential culture. The following are among the thousands of modern words recently added to the English Language:

- Bling (n): Expensive, ostentatious clothing and jewelry.
- Bromance (n): A close but non-sexual relationship between two men.
3. Initiatives Aiming at the World’s Linguistic Unification

Passive Initiatives (language change)

- **Grrrl (n):** A young woman regarded as independent and strong or aggressive, especially in her attitude to men or in her sexuality (A blend of “Grrrr” and “Girl.”)
- **Guyliner (n):** Eyeliner that is worn by men.
- **La-la Land (n):** A fanciful state or dream world. Also, Los Angeles.
- **Mankini (n):** A brief one-piece bathing garment for men, with a T-back.
- **OMG (expletive):** Used to express surprise, excitement, or disbelief. (Dates back to 1917.)
- **Screenager (n):** A person in their teens or twenties who has an aptitude for computers and the Internet.
- **Sexting (n):** The sending of sexually explicit photographs or messages via mobile phone.

A short parallel between biological evolution and linguistic evolution may help us understand the dynamics of language change. Biological evolution follows the natural selection model in which species that cannot adapt to the environment go extinct to make room for species that can, and even make room to new species. But, linguistic evolution follows the migration model instead, meaning when groups are separated, new types of languages emerge. Biological evolution and linguistic evolution have in common the fact that there are species, subspecies, classes, and families in both. Languages change naturally. All languages change. But some languages change faster than others. To speak of language change, the change must be deep and significant. In that regard, accent, which is the way a language is pronounced is rather superficial. Accents don’t necessarily disappear when languages are moved over long distances. While children and younger generations play an important role in language change by inventing new words because of new experiences and new environments, they may perpetuate their ancestors’ accent for it was passed onto them from generations to generations. By the time someone speaks a language while growing up, he/she has already inherited their parents’ accents without noticing it and there is nothing they can do about it. To understand that, we can ask ourselves a simple question: how did the British sound in colonial times? How did the French sound in around the same period?

One does not need to go to a lot of trouble to find the answers to these questions. The British sounded somewhat like 21st century Americans and Canadians. The accent they brought to America hasn’t substantially changed. Surprisingly, it’s their accent that has changed because of the received pronunciation they introduced in their phonetics over the years, which has become the standard British accent. The British received pronunciation resulted from a voluntary effort and is therefore artificial. Today, the typical and standard American accent is the one spoken on television. Southern American accent and Ebonics’ accent are not considered standard.

Standard French accent – the one spoken within continental France – is the result of a similar undertaking. If you want to hear how the French sounded in the 17th – 18th century, go to Quebec (Canada). Like the Americans, they retained the accent of their ancestors. While in terms of syntax and vocabularies the Quebec French language itself has substantially changed over the centuries and tends to eliminate differences between their French and the French spoken in France,
phonetically, it hasn’t changed much. The Quebec accent is unique among all the French-speaking countries. While it’s relatively easier to understand the educated Quebecer after a few weeks spent in the province – especially in the Greater Montréal area, where, I think, the French that is spoken is a standard and international French – it might take much longer to understand the less educated. So why do Quebecers speak differently from people living in France? It’s because the Académie française made many phonetic changes to the French language over the centuries and, like in America, they favor the accent spoken on television as the standard accent, something that does not really exist in Quebec. Although received pronunciations are in fact artificial, they are best viewed as passive initiatives in the long term because ultimately, the children who speak a certain way inherit their accents from their parents and have no control over it. This dynamic of language change shows how language can play into our hands and, thus, could be used as a model in the planning for a potential universal native language.

Language contact

Language contact implies, first and foremost, contact among people who speaks two or more different types of languages, which influence one another over the centuries. Therefore, it is a social and linguistic phenomenon, which plays a seminal role in language change (see above). New languages may not necessarily emerge from language contact. In that case, people end up being either bilingual or multilingual. Robert H. Robins thinks that “languages do not just spread and compete with each other for territorial use. They are in constant contact, and every language bears evidence of this throughout its history. Modern Greek is full of words of Turkish origin, despite efforts made at various times since independence to “purify” the language by official action. The Norman Conquest and a period in which French was the language of the ruling class in England effected great changes on English and contributed a very substantial number of French words to English vocabulary—hence the quantity of near synonymous pairs available today: begin, commence; end, finish; kingly, royal; fight, combat; and so on.” He goes on to say that “the fundamental cause of linguistic change and hence of linguistic diversification is the minute deviations occurring in the transmission of language from one generation to another. But other factors contribute to the historical development of languages and determine the spread of a language family over the world’s surface. Population movements naturally play a large part, and movements of peoples in prehistoric times carried the Indo-European languages from a relatively restricted area into most of Europe and into northern India, Persia, and Armenia. The spread of the Indo-European languages resulted, in the main, from the imposition of the languages on the earlier populations of the territories occupied. In the historical period, within Indo-European, the same process can be seen at work in the Western Roman Empire. Latin superseded the earlier, largely Celtic languages of the Iberian Peninsula and of Gaul (France) not through population replacement.
(the number of Roman soldiers and settlers in the empire was never large) but through the abandonment of these languages by the inhabitants over the generations as they found in Latin the language of commerce, civilization, law, literature, and social prestige."

English, like many other languages, has been and continues to be influenced by all major languages spoken around the world today. No language, especially in this globalization age and social networks, can escape this powerful force better known as language contact theory. English is essentially a Germanic language with a touch of Latin, Greek, French, Italian, and many more. Thanks to its most popular international lingua franca status since the 17th century, many people around the world feel compelled to learn English. But along with this linguistic diffusion phenomenon, a linguistic osmosis is occurring as well, meaning the English language is being transformed by the very people who are learning it. Even though English is the number one lingua franca, it’s still being influenced by other languages with which it comes in contact. When a language uses directly a word from another language, that word is known as a loanword, which is not to be confused with words with foreign roots, as I showed above for Latin and Greek. Today, as more and more people are learning English, more and more loanwords are being used at the same time. This causes English to be the language with the richest vocabulary among all languages. I can thus infer that it’s a good indication that an international language may eventually emerge through language contact. The following list of loanwords is for illustration purpose and is not exhaustive:

- Aficionado: [Spanish] An ardent admirer or fan of something.
- Alter ego: [Latin] An ‘other self’. Used to describe the other personality of a person who leads a double life.
- Basmati: [Hindi] Something with a pleasant aroma, fragrant. In English, it is usually used along with ‘rice’ to refer to the Indian dish.
- Bric-à-brac: [French] A miscellaneous collection of small decorative objects, otherwise known as souvenirs, bobbles or trinkets.
- Doppelgänger: [German] A double, or look-alike person, often with negative connotations since some people believe that seeing your own doppelgänger is an omen of impending death.
- Dorp: [Dutch]: A village, and is closely related to Old Norse, Old English, and English thorp “farmstead, hamlet, village,” and German Dorf. Dorp occurs in the name New Dorp, a neighborhood on Staten Island (one of the boroughs of New York City), a derivation of Dutch Nieuw Dorp “New Village.” Dorp entered English in the 16th century.

22 For a complete list, please refer to the Dictionary of foreign words and phrases – Second Edition, by Martin H. Manser (see bibliography)
3. Initiatives Aiming at the World’s Linguistic Unification

Passive Initiatives (language contact)

- Faux pas: [French] The violation of a commonly accepted social rule, a blunder like a gaffe.
- Fiancé / Fiancée: [French]: a man who is engaged to be married / a woman who is engaged to be married.
- Hoi Polloi: [Greek] The many, or the masses. Usually used in a derogatory sense to refer to ‘common people’ vs. the ‘upper-crust’ of society.
- Kitschy: [German, or Yiddish] The quality of being lowbrow, tacky, or in bad taste, usually used in reference to art or decorations.
- L’enfant terrible: [French] A child who says or does really embarrassing things, or, a successful adult whose achievements were executed in an unorthodox way.
- Le Mot Juste: [French] The most appropriate word.
- Mea culpa: [Latin] Literally, ‘my own fault’. Usually used by a person who is admitting guilt for some wrong-doing.
- Ménage à trois: [French] A household of three. Usually, an arrangement where three people share a sexual relationship.
- Modus Operandi: [Latin] Someone’s habits or method of operating (often used by police investigators to describe someone’s criminal profile, or MO)
- Nouveau riche: [French] Newly rich. Usually used in a derogatory sense to refer to someone who uses newly-earned wealth to purchase kitschy things.
- Paladin: [From Latin to Italian to French] 1. A heroic champion (especially a knightly one). 2. A defender or advocate of a noble cause. (A defender of faith). 3. Any of the twelve Companions of the court of Emperor Charlemagne. *Origin:* Paladin nowadays usually means “defender or advocate of a noble cause,” but it still retains its original meaning “any of the twelve peers of Charlemagne’s court or of his vassals.” One of the earliest applications of the word, if not the earliest, is to Roland of Brittany, who died in 778 A.D. at the Battle of Roncevaux Pass (or Roncesvalles) in the Pyrenees in the Basque region of Spain, and was immortalized in the “Chanson de Roland” (“Song of Roland”), which was composed c1100. Paladin ultimately derives from the Latin proper noun Palātium, the name of the chief hill of the seven hills of Rome and the site of the earliest Roman settlements. The Latin adjective and noun Palātīnus derives from the noun Palātium and means “pertaining to the Palatine hill, pertaining to the imperial palace; an officer of the imperial palace, chamberlain.” The post-Augustan Latin usage passed into Italian as paladino, which was adopted in Middle French as palladin, and through French into English. Paladin entered English in the late 16th century.
- Poshlust: [Russian] From the Russian word, poshlost, meaning ‘petty, trivial and vulgar’, it was re-branded by Vladimir Nabokov to mean ‘trashy, falsely clever, and falsely beautiful’.
- Prima donna: [Italian] Literally, ‘first lady’ as in the principal female singer in an opera, but usually used to refer to a spoiled, ill-tempered person.
- Quid pro quo: [Latin] Literally, ‘something for something’. Often used in place of ‘you scratch my back and I’ll scratch yours’ or during negotiations to ask, ‘what’s in it for me’?"
• Samurai: [Japanese] The military class that served the nobility in pre-industrial Japan. Pop-culture has taught English speakers to equate samurai with physically strong, somewhat ascetic, undyingly loyal heroes, though the factual history is more nuanced.
• Schadenfreude: [German] The pleasure one takes from someone else’s misfortune.
• Taco: [Spanish] The traditional Mexican dish made from a corn or wheat tortilla filled with just about anything your heart desires and eaten out of hand; Perhaps, the perfect food?
• Zeitgeist: [German] The spirit of the times. Used to describe things in the socio-cultural air, like trends or ideas that describe an era.

Universal language of science

“In all scientific endeavors lies an ancient drive for sharing ideas and knowledge. Communication serves as the driving force behind turning brilliant ideas into world-changing realities … The rise of Arabic as one of the world’s great lingua francas followed in the aftermath of the remarkably swift expansion of Islam as a world religion. Within a mere forty years after Muhammad’s death in 632 CE, Muslim conquests had spread as far west as the shores of Tunisia and as far east as the Hindu Kush of Pakistan. By the early eighth century, Arabic had replaced dozens of tongues as the language of political and military power, and only a few decades more were needed for it to become the new language of literary expression and scientific knowledge.” (Montgomery, 2013). It goes without saying that an era’s language of science is normally the language that is the most popular worldwide. Newton’s *Principia Mathematica* was written in Latin; Einstein’s first influential papers were written in German; Marie Curie’s work was published in French. While we can understand why Einstein and Marie-Curie published their works respectively in German and in French, why did Isaac Newton, a 16th – 17th century British scientist publish his *Principia Mathematica* – full title: *Philosophiae Naturalis Principia Mathematica* [Mathematical Principles of Natural Philosophy] – in Latin? Traditionally, Latin had been a vernacular language throughout the Roman Empire and a lingua franca or bridge language elsewhere. It lost that status at the fall of the Roman Empire but maintained its prestige in Europe’s educated circles and within the scientific community especially at the height of the Renaissance Movement23. Latin lost its influence at around the same time French lost its influence at the height of the Industrial Revolution of the 18th century. English became even more influential in the wake of World War II, when the United States became the leader of the free world. Before talking about English as today’s universal scientific language, it is worth noting that, before Latin – or parallel to Latin – Greek was also both a vernacular language and a lingua franca. Knowing both Greek and Latin was the norm for Early scientists and Churchmen. The first translation of the Bible from Hebrew was in Greek, before Saint Jerome’s Latin translation. In the medical field, for example, most of the

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23 The Renaissance was a period in European history, from the 14th to the 17th century (1300 - 1700), regarded as the cultural bridge between the Middle Ages and modern history.
terminologies have their roots both in Greek and in Latin. The table below is a partial list of Greek and Latin prefixes and suffixes that someone should know before studying Anatomy and Physiology:

<table>
<thead>
<tr>
<th>English Form</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>a(n)-</td>
<td>without, not</td>
<td>anaerobic</td>
</tr>
<tr>
<td>aut(o)-</td>
<td>self</td>
<td>autonomic</td>
</tr>
<tr>
<td>dys-</td>
<td>bad, disordered</td>
<td>dysplasia</td>
</tr>
<tr>
<td>ec-, ex(o)-, ect-</td>
<td>out, outside</td>
<td>exoskeleton</td>
</tr>
<tr>
<td>end(o)-</td>
<td>within, inside, inner</td>
<td>endometrium</td>
</tr>
<tr>
<td>epi-</td>
<td>over, above</td>
<td>epidermis</td>
</tr>
<tr>
<td>hyper-</td>
<td>excessive, high</td>
<td>hyperextension</td>
</tr>
<tr>
<td>hypo-</td>
<td>deficient, below</td>
<td>hypothalamus</td>
</tr>
<tr>
<td>inter-</td>
<td>between, among</td>
<td>interoceptor</td>
</tr>
<tr>
<td>intrañ</td>
<td>within, inside</td>
<td>intraocular</td>
</tr>
<tr>
<td>iso-</td>
<td>equal, same</td>
<td>isotope</td>
</tr>
<tr>
<td>meta-</td>
<td>beside, after</td>
<td>metacarpus</td>
</tr>
<tr>
<td>ortho-</td>
<td>straight, correct</td>
<td>orthopedic</td>
</tr>
<tr>
<td>para-</td>
<td>beside, near, alongside</td>
<td>parathyroid</td>
</tr>
<tr>
<td>peri-</td>
<td>around</td>
<td>pericardium</td>
</tr>
<tr>
<td>sub-</td>
<td>under</td>
<td>subcutaneous</td>
</tr>
<tr>
<td>trans-</td>
<td>across, beyond, through</td>
<td>transplant</td>
</tr>
<tr>
<td>-blast</td>
<td>-to sprout, to make, to bud</td>
<td>chloroblast</td>
</tr>
<tr>
<td>-clast</td>
<td>to break, broken</td>
<td>osteoclast</td>
</tr>
<tr>
<td>-crine</td>
<td>-to release, to secrete</td>
<td>endocrine</td>
</tr>
</tbody>
</table>
But today, English has established itself as the language of science after supplanting French in the 18th century at the height of the industrial revolution because the French language was lacking the scientific vocabulary and found itself lagging behind and always trying to catch up. Then, came the information revolution in the wake of World War II. Although several information technology terms are translated into each nations’ language, the same phenomenon is happening: they are in a constant state of catching up. Most languages just keep the original English terminologies as is in order to be politically correct and to make it easier for the speakers who are already familiar with the English terms. The prevalence of English is all the more obvious that in some influential non-English speaking such as Germany, France, Spain, Russia, and China, academic and scientific research papers are published in English. According to The Atlantic, A 2012 study from the scientific-research publication Research Trends examined articles collected by SCOPUS, the world’s largest database for peer-reviewed journals. To qualify for inclusion in SCOPUS, a journal published in a language other than English must at the very least include English abstracts; of the more than 21,000 articles from 239 countries currently in the database, the study found that 80 percent were written entirely in English. Zeroing in on eight countries that produce a high number of scientific journals, the study also found that the ratio of English to non-English articles in the past few years had increased or remained stable in all but one [...] This gulf between English and the other languages means that non-English articles, when they get written at all, may reach a more limited audience. On SCImago Journal Rank—a system that ranks scientific journals by prestige, based on the citations their articles receive elsewhere—all of the top 50 journals are published in English and originate from either the U.S. or the U.K. Scientists who want to produce influential, globally recognized work most likely need to publish in English, which means they’ll also likely have to attend English-language conferences, read English-language papers, and have English-language discussions. In a 2005 case study of Korean scientists living in the U.K., the researcher Kumju Hwang, then at the University of Leeds, wrote: ‘The reason that [non-native English-speaking scientists] have to use English, at a cost of extra time and effort, is closely related to their continued efforts to be recognized as having internationally compatible quality and to gain the highest possible reputation’”. This universality of the English language as the language of science didn’t stem from an agreed upon international regulation. It’s not a dogma. It’s a spontaneous phenomenon, which we all passively accept. Whether a scientist is in the medical field, chemistry, physics, astronomy, etc., learning English or publish in English seems the right thing to do. This is due to the fact that science is universal and is best spread using a popular and universal language.

However, there are exceptions to the implicit rule of English as being the language of science. A new research led by the University of Cambridge finds that languages are still a major barrier to global science. According to Science Daily, “over a third of new conservation science documents published annually are in non-English languages, despite assumption of English as scientific ‘lingua franca.’ Researchers find examples of important science missed at international level, and practitioners struggling to access new knowledge, as a result of language barriers…contributing to biases in our understanding.” The researchers from the University of Cambridge think that as well
as the international community missing important science, language hinders new findings getting through to practitioners in the field of science. They argue that whenever science is only published in one language, including solely in English, barriers to the transfer of knowledge are created. ‘While we recognize the importance of a lingua franca, and the contribution of English to science, the scientific community should not assume that all important information is published in English,’ says Dr. Tatsuya Amano from Cambridge's Department of Zoology...Language barriers continue to impede the global compilation and application of scientific knowledge.” “Scientific knowledge generated in the field by non-native English speakers is inevitably under-represented, particularly in the dominant English-language academic journals. This potentially renders local and indigenous knowledge unavailable in English...The real problem of language barriers in science is that few people have tried to solve it. Native English speakers tend to assume that all the important information is available in English. But this is not true, as we show in our study...On the other hand, non-native English speakers, like myself, tend to think carrying out research in English is the first priority, often ending up ignoring non-English science and its communication...I believe the scientific community needs to start seriously tackling this issue.”, says lead author Amano. He, along with his colleagues, went on to say that, when conducting systematic reviews or developing databases at a global scale, speakers of a wide range of languages should be included in the discussion: ‘at least Spanish, Portuguese, Chinese and French, which, in theory, cover the vast majority of non-English scientific documents’ … Journals, funders, authors and institutions should be encouraged to supply translations of a summary of a scientific publication -- regardless of the language it is originally published in. While outreach activities have recently been advocated in science, it is rare for such activities to involve communication across language barriers.” We should see this as an opportunity as well as a challenge. Overcoming language barriers can help us achieve less biased knowledge and enhance the application of science globally.” A summary of the new study has been provided in Spanish, Portuguese, Chinese, French, and Japanese.

Universality of language and genetics

I showed earlier how the acquisition of language in the sense of speech ability depends on the proper anatomy of our vocal organs, but also on psychological factors or cognitivism. When considering the possibility of a universal language, it is worth to also look at the genetic aspect of language. By and large, genetics is defined as the study of heredity and the variation of inherited characteristics. Here, the relationship between genetics – or inheritance – and language is not meant in the sense that someone will inevitably speak the language of their parents no matter the environment in which they grow up. Spoken languages are part of our character, which is different from our temperament, which is the general mood people are prone to. Some theorists believe that we are born with a particular temperament, such as a happy person, a sad person, a moody person,
introverted, extroverted, etc. In other words, temperament is inherent and is an integral part of someone's nature. It can be revealed as early as early childhood. "Childhood shows the man, as morning shows the day." John Milton (1608-1674). Character are the traits we develop as we mature, such as honesty, integrity, thoughtfulness, kindness, etc. A person can develop these traits no matter what temperament they have because it depends how we respond to things and the choices we make. Temperament is nature. Character is nurture. The relationship between genetics and language is broad, uniform, and applies to all human beings the same way. Because the human genome is virtually uniform, we all have the same language possibility, which mostly depends on a specific gene called Forkhead box protein P2 Gene (FOXP2), whose mutations can cause severe speech and language disorder. In their article The Genetics of Language, MIT Technology Review reports that "Neurogeneticists have so far definitively linked only a single gene to speech and language. The story of its discovery begins in 1990, when clinical geneticists at the Institute of Child Health in London first reported a speech disorder that appeared in three generations of Britons known as the KE family. The doctors took note of 15 affected members who seemed to have inherited problems with grammar, syntax, and vocabulary that were tied to poor control of facial muscles and difficulty pronouncing words. Although it seemed clear that there had to be a genetic link, researchers hunted for more than a decade before they found the gene responsible. The big break came in 1998, when University of Oxford geneticists led by Anthony Monaco and Simon Fisher identified a distinct chunk of chromosome 7 linked to the speech and language problems found in the KE family. Yet the region held dozens of genes, and they couldn’t pinpoint the one bad actor. Enter Jane Hurst, a clinical geneticist who worked at a hospital on Oxford’s grounds and, coincidentally, had coauthored the first report on the KE family.” “The gene called FOXP2 is a transcription factor, meaning it regulates other genes. Past research has suggested this gene remained relatively unchanged along mammal evolution until after humans and chimps diverged. And about 200,000 years ago, when modern humans appeared on the scene, scientists think two amino acids (building blocks of proteins) changed in FOXP2 [...] Scientists found 116 genes that were expressed differently in humans compared with chimps, suggesting FOXP2 is responsible for those differences [...] FOXP2 is not only important for the higher order cognitive aspect of language but also for the motor aspect of speech and language.”

So, how does this fourth parameter compare to the previous three: language change, language contact, and English as the universal language of science? For starters, the FOXP2 gene shows the prospect of human’s linguistic capability might experience significant changes 200,000 years from now, like it did 200,000 years ago. These changes might be for the better or for the worst. We might lose our language ability due to genetic mutations or the former might increase ten folds and either provide us with the ability to speak any language – other than our native language – fluently no matter what age we come in contact with it or make us predisposed to finally adopt a single language that would be universal, effectively eliminating language barriers. On the other hand, both the language change and the language contact theories show that it’s possible for languages
to break apart, but also to combine and form new languages. Languages change because they come in contact with different environments, different people, or different cultures. I showed earlier how the English spoken across the world varies from one country to another, even within the same country. No language is impervious to this dynamic. Today, in France, except for the noticeable difference between northern and southern French accents, Provençal (a dialect spoken in the southeast), and slight differences between the French spoken from one region to another, the French language is relatively uniform. But, outside of France, the varieties of French cannot go unnoticed. The French spoken in the following regions or countries, although mutually intelligible, show essential differences: Canada (Quebec, Newfoundland), United States (Louisiana), Haiti, Africa, Belgium, and Switzerland. Finally, Spanish also has many varieties such as: Castilian, Andalusian, Murcian, Distinct Language Groups, Canarian, Llanito, Latin American Spanish, and Rioplatense Spanish to name a few.

Language change and language contact are also impacted by economic activities and population growth. Languages spoken in wealthy nations tend to induce the extinction of those spoken in less wealthy nations. This dynamic may not be popular among the opponents of a universal language or people who take pride in their traditional languages, but this point is worth raising when considering the factors (linguistic or non-linguistic) that might eventually lead to the emergence of a common native language, which, in order to establish itself, must first rise from the extinction of a large number of languages, at least that of the minority languages. Although economy and population growth impact language change and language contact directly, they cannot be placed under active undertakings aiming at a potential linguistic unification of the world because they are not governed by any legitimate and specific entities whose role is to willfully utilize them as factors which could modify the international linguistic makeup or structure. Therefore, they are passive but critical and indispensable parts of the international linguistic cogwheel’s mechanism. In her article *Economic success drives language extinction*, published by the university of Cambridge, Dr. Tatsuya Amano writes: “As economies develop, one language often comes to dominate a nation’s political and educational spheres. People are forced to adopt the dominant language or risk being left out in the cold – economically and politically. Unlike species extinction, however, language diversity has a potentially saving grace – bilingualism. Previous research from Cambridge’s Department of Theoretical and Applied Linguistics has shown that children who speak more than one language have multiple advantages in education, cognition and social interaction. As economies develop, there is increasing advantage in learning international languages such as English.”

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24 The French constitution recognizes one language: French, and the government is obligated to communicate with the people in standard French even though a revision of the French constitution creating official recognition of regional languages was implemented by the Parliament in Congress at Versailles in July 2008 (Article 75 – 1).
Finally, as for English as the universal language of science, it proves that a universal spoken language may be possible if people around the world achieve a high level of education. Our world is science-laden, and science is universal, meaning its laws and rules are the same everywhere, irrespective of any country or region. Science crosses social and cultural boundaries and plays a momentous role in terms of the linguistic unification of our world. Since science is universal, any language can be the language of science. For example, the sounds produced by human’s vocal organs are technically the same no matter the language. The fact is only humans have voice, which is defined as the sound produced in a person’s larynx and uttered through the mouth, as speech or song. The only difference is while in one language, a specific sound represents a specific object or abstraction, in another it represents something else. That happened over time, thousands of years ago, because of migration of people over long distances and because they had different experiences. But Languages are fundamentally virtually mirror images of each other, albeit different from each other on the surface. The order of the components of a typical English sentence, for example, requires that the head or subject precedes the verb, which precedes the object, etc., but in order languages, such as German, the order may be reversed. Example: “Ich werde es finden” is German for “I will find it” But, a word for word translation leads to: I will it find. However, the mind’s intent, meaning what it wishes to occur, ultimately remains the same both in the English and the German versions.

Up until now, we have every reason to be optimistic regarding the emergence of a global native language. The analysis made thus far shows that in fact the mechanism and the dynamism of language are common to all human beings. Language, as a means of communication among human beings, shares the same physical and cognitive aspects in terms of acquisition, in all societies and cultures indiscriminately because, as humans our vocal organs are similar, except for birth defect, and our brains function the same way when it comes to converting vocal sounds into representations. Because languages are used by humans, they all share the same characteristics in terms of how they get to branch out into dialects. All major languages can be broken down into dialect, sociolect, ethnolect, regiolect, idiolect accent, and register as seen above. Languages influence one another, loan words from one another, and, in the process, supplant one another. This dynamic seems conducive to the apparition of a language that we all would speak either by consensus or because of such powerful environmental forces as economy, culture, or influence. If Latin, for instance, ended up branching out into five major Romance languages, it could have, by the same token, survived should scholars back then had the wonderful idea to keep calling their dialects Latin and to empower an entity that would regulate the language, similar to the Académie française of France, the Real Academia Española of Spain, or the Rat für deutsche Rechtschreibung of Germany. The same thing could be said of English, Spanish, or French today, being the three most popular international languages. If Latin, after so many centuries, still influences so many languages, the prospect of a universal language in the future is good. Esperanto is overlooked.
probably because it’s a constructed language or there is no economic or cultural influence to back it up, which hinders its potential lingua franca status.

Nations around the globe just need to be clairvoyant by realizing that the future of our world lies within unity, be it economic, cultural, or linguistic. But, these are just speculations. Our world is intricate and bizarre at times. The same factors that are favorable to a good thing may turned out to be unfavorable to that same thing under different circumstances. For example, cultural differences, traditions, pride, gun battles led to the breakup of Latin and to the emergence of the Romance languages. These same parameters led to the linguistic unification of the United States. During colonial times, there were hundreds of cultures, tribes, and languages spoken on the continental US. After accessing to statehood, the new country saw the necessity to conquer the West. Native Americans were moved from east to west to be resettled. New western territories were purchased or seized thanks to gun battles. The United States bought Louisiana from France. Louisiana represented the whole Midwest and spoke French. From all those upheavals and bloodshed emerged the country known today as the United States of America, an English-speaking country and whose cultural hegemony and economic influence are being felt and copied worldwide. Thanks to America, English has become the international lingua franca of the 21st century, the same status that French had up until the 17th century. The Internet and social networks have brought the world closer than ever before. Humans move faster from one place to another. We learn quickly and more efficiently thanks to technology. Then, would it be an overstatement to say that we are on the fast track to become a monolingual world? It’s not a hyperbole if we consider everything that is been discussed so far. But, is that realistically possible? What kinds of snags, if they exist, could we hit in the process? What are some of the potentials barriers to such a big dream?

……………………
4. BARRIERS TO THE WORLD’S LINGUISTIC UNIFICATION

Use of military power, imperialism, or wars

As I just explained above, gun battles may play a dual role in language dynamics. Sometimes, they may induce language expansion as in the case of colonial America, but they may also cause language extinction as in the case of the Roman Empire whose fall led to the breakup of Latin. This isn’t a history book, but in the context of historical linguistics, it’s important to understand why the rise and fall of empires cause their traditional languages to rise and fall with them. Linguistically speaking, the Roman empire is the ultimate example, but we can look way beyond its advent or its origins. Before the Romans, there were the Etruscans who, according to Encyclopedia Britannica, “were Ancient Italic people, diverse in origin, language, traditions, stage of development, and territorial extension who inhabited pre-Roman Italy. The Etruscans formed the most powerful nation in pre-Roman Italy. They created the first great civilization on the peninsula, whose influence on the Romans as well as on present-day culture is increasingly recognized. Evidence suggests that it was the Etruscans who taught the Romans the alphabet and numerals, along with many elements of architecture, art, religion, and dress. Although their culture was influential, their language did not survive. Militarily, they were rivaled by the Greeks and the Phoenicians. The end of the 6th century and the beginning of the 5th was a turning point for Etruscan civilization. Several crises occurred at this time, from which the Etruscans never fully recovered and which in fact turned out to be only the first of numerous reverses they were to suffer in the ensuing centuries [...] All these reverses led to economic depression and a sharp interruption of trade for the cities on the coast and in the south and caused a redirection of commerce toward the Adriatic harbor of Spina. The situation in the south deteriorated even further as Veii experienced periodic conflict with Rome, its close neighbor, and became the first Etruscan state to fall to this growing power in central Italy (396 BCE). In 90 BCE, Rome granted citizenship to all Italic peoples, an act that in effect created total political unification of the Italic-Roman state and eliminated the last pretenses of autonomy in the Etruscan city-states. Northern Etruria, in addition, underwent a final devastation as it became the battleground for the opposing forces of the civil war of Marius and Sulla. Many Etruscan cities sided with Marius and were sacked and punished with all the vengeance the victorious Sulla could muster (80–79 BCE). At Faesulæ, Arretium, Volaterræ, and Clusium, the dictator confiscated and distributed territorial lands to soldiers from his 23 victorious legions. The new colonists brutally abused the old inhabitants and at the same time squandered their military rewards, sinking hopelessly into debt. Revolts and reprisals followed, but the agonizing process of Romanization was not actually completed until the reign of Augustus (31 BCE–14 ce) brought new economic stability and reconciliation. By this time Latin had almost completely replaced the Etruscan language.” Rome grew from a State to an Empire from west to east including Britain and North Africa; an Empire so big it had to be divided into the Western Roman Empire and the Eastern Roman Empire, each having their own emperor. Of
course, it didn’t take long for Latin to become a world-class language. But, by the time Rome fell, everybody saw Latin as a dogma and sought cultural and linguistic diversity.

Imperialism and military power are, most of the time, uncongenial to language expansion and acceptance. I say most of the time because sometimes it’s possible that the language of the conqueror be accepted when the conquered have no other choice. That wasn’t the case for the regions annexed by Rome, which all succeeded in getting rid of Latin. But, modern times colonialism plead in favor of linguistic expansion through imperialism. The four colonial powers – France, England, Spain, and Portugal – have all succeeded in spreading their traditional languages across the world. I have to say that the fact there was no dominant and homogeneous languages in the colonies favored the adoption of the conquerors’ languages, as a lingua franca but that soon turned into pidgins and creole languages because the slaves came from different parts of Africa and their dialects weren’t mutually intelligible. Also, the settlers would separate the slaves who came from the same regions or spoke the same dialects to avoid disobedience and conspiracy.

Today, English is spoken in the United States and Canada, the Caribbean, Africa, Australia, and New Zealand. French is spoken in North America (Quebec, Newfoundland, and Louisiana), the Caribbean, Africa, and Pacific Asia. Spanish is spoken in North, Central, and South Americas, the Caribbean, and Africa (Equatorial Guinea being the only Spanish-speaking country). Finally, Portuguese is spoken in South America (Brazil), and Africa (Angola, Cape Verde, Guinea-Bissau, Mozambique, and São Tomé and Príncipe). This second argument has a major flaw: times have changed. The conjunctures are no longer the same. The world is now better educated, connected, and more or less unified. Imperialism and wars may no longer favor linguistic expansion and the emergence and adoption of a specific language because of the military might possessed by its speakers. Aggression might in fact, constitute a hindrance to cultural and linguistic leadership. From the Etruscan civilization to the Roman civilization and Colonialism, gun battles may have had two different linguistic outcomes, but in the 21st century, where all the major economies are industry and technology-oriented, military aggression is more likely to be met with fierce linguistic opposition, especially if it’s conducted with the intent to impose a language on other nations. Militarism and imperialism aren’t the only ambivalent parameters that can impact language expansion or extinction. Other ambivalent factors such as language regulation and culture are also worth considering.

Language regulation

Language regulation, also known as language policy is a set of measures designed to favor or discourage the use of a particular language or set of languages. These measures may be in the form of rules (implicit or explicit) or laws enacted by the government. Although they both focus on
overseeing language, language regulation and language planning are not quite the same. Language regulation usually follows language planning and is more drastic and is, most of the time, official. We saw previously how language regulation may turn out to be helpful in language expansion and conservation. Keep in mind, however, that it may also hinder the development of a language at the same time. Too many rules to follow and the existence of entity to which everyone must report are serious barriers to the democratization of a language by slowing down its evolution. This is illustrated by the lag between the speed at which phonetics and spelling progress. Phonetics progress faster than spelling. What that means is people, especially younger generations, are more efficient at changing the way words are pronounced than any established entity. Again, people make languages. Words’ sound changes so fast that by the time scholars decide to change the spellings to reflect the sounds, it’s already too late. The sounds change again. Phonology is more important than spelling. According to Oxford Dictionary, “the concept of ‘correct’ spelling is fairly recent. There are many reasons why English spelling is so erratic including the lack of an academy, the contributions of Noah Webster and the introduction of William Caxton’s printing press just before major changes in pronunciation. But the idea of correct or incorrect spelling wasn’t really considered important until the 17th Century when the first dictionaries were published. Even then, it was largely a debate for academics and writers. Shakespeare, for example, was liberal in his spellings of words, often using multiple variants within a single text; his name itself has been spelt in many different ways over the centuries.” Another reason why language regulation is a barrier to language expansion is that speakers, especially non-native speakers, may at times feel pressured to use the formal version of a language for fear that they’ll be stigmatized as uneducated.

“Deliberate interference with the natural course of linguistic changes and the distribution of languages is not confined to the facilitating of international intercourse and cooperation. Language as a cohesive force for nation-states and for linguistic groups within nation-states has for long been manipulated for political ends. Multilingual states can exist and prosper; Switzerland is a good example. But linguistic rivalry and strife can be disruptive. Language riots have occurred in Belgium between French and Flemish speakers and in parts of India between rival vernacular communities. A language can become or be made a focus of loyalty for a minority community that thinks itself suppressed, persecuted, or subjected to discrimination. The French language in Canada in the mid-20th century is an example. In the 19th and early 20th centuries, Irish Gaelic, or Irish, came to symbolize Irish patriotism and Irish independence from Great Britain, and Irish became Ireland’s first official language at that country’s independence. Government documents are published in Irish and English (the country’s second official language), and Irish is taught in state schools, though it remains under the significant international pressures exerted by English that are described above ... A language may be a target for attack or suppression if the authorities associate it with what they consider a disaffected or rebellious group or a culturally inferior one. There have been periods when American Indian children were forbidden to speak a language other than
Places where language is heavily regulated may experience societal issues. Quebec (Canada) is a good example. In an article dated March 24, 1961, Université de Sherbrooke explains that “The Office québécois de la langue française (OQLF) (English: Quebec Board of the French Language) is a public organization established on March 24, 1961 by the Liberal government of Jean Lesage. Attached to the Ministère de la Culture et des Communications du Québec, its initial mission, defined in its report of April 1, 1964 was “to align on international French, promote good Canadianisms and fight Anglicisms [...] work on the normalization of the language in Québec and support State intervention to carry out a global language policy that would consider notably the importance of socio-economic motivations in making French the priority language in Québec”. The office’s mandate was enlarged by the 1977 Charter of the French Language, which also established two other organizations: The Commission de toponymie (Commission of Toponymy) and the Conseil supérieur de la langue française (Superior Council of the French Language).” “They (the language police) enforce the rules by doling out fines to noncompliant businesses, and are usually plain clothed and covert. Recently, language tensions have risen among locals, and OQLF overzealousness was the main culprit.” The table below is an abstract from Quebec's charter of the French language of 1977.

<table>
<thead>
<tr>
<th>CHARTER OF THE FRENCH LANGUAGE (Abstract)</th>
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<tbody>
<tr>
<td><strong>PREAMBLE</strong></td>
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</tbody>
</table>
| WHEREAS the French language, the distinctive language of a people that is in the majority French-speaking, is the instrument by which that people has articulated its identity; Whereas the National Assembly of Québec recognizes that Quebecers wish to see the quality and influence of the French language assured, and is resolved therefore to make of French the language of Government and the Law, as well as the normal and everyday language of work, instruction, communication, commerce and business;  

Whereas the National Assembly intends to pursue this objective in a spirit of fairness and open-mindedness, respectful of the institutions of the English-speaking community of Québec, and respectful of the ethnic minorities, whose valuable contribution to the development of Québec it readily acknowledges;

Whereas the National Assembly of Québec recognizes the right of the Amerinds and the Inuit of Québec, the first inhabitants of this land, to preserve and develop their original language and culture;
CHARTER OF THE FRENCH LANGUAGE (Abstract)

Whereas these observations and intentions are in keeping with a new perception of the worth of national cultures in all parts of the earth, and of the obligation of every people to contribute in its special way to the international community;

Therefore, Her Majesty, with the advice and consent of the National Assembly of Québec, enacts as follows:

TITLE I
STATUS OF THE FRENCH LANGUAGE
CHAPTER I
THE OFFICIAL LANGUAGE OF QUÉBEC

1. French is the official language of Québec.
   1977, c. 5, s. 1.

CHAPTER II
FUNDAMENTAL LANGUAGE RIGHTS

2. Every person has a right to have the civil administration, the health services and social services, the public utility enterprises, the professional orders, the associations of employees and all enterprises doing business in Québec communicate with him in French.

It’s important to note that the reason why the French language is so heavily regulated in Quebec is more political than cultural. The French language is used as the main weapon in their ongoing non-violent struggle – the separatist movement25 – to become a nation in its own right. For Quebecers, French is one of the most important tools available to them to claim both their cultural identity and differences vis-à-vis English-speaking Canada. As part of that initiative, before 2014, American companies, for example, had to translate their names into French before being allowed to do business in Quebec. Kentucky Fried Chicken (KFC) in Quebec is called PFK (Poulet Frit du Kentucky). But, according to CBC News, in April 2014, “A judge has ruled that major retailers do not have to modify their commercial trademark English names into French, as the province’s language watchdog had hoped. It was ruled that businesses that have storefront signs with their trademark name in a language other than French do not contravene the French Language Charter.” While French speakers in other countries might find it cool, open-minded, or eclectic to include a few Anglicism in their conversation, Quebecers might find it offensive or construe it as the manifestation of an inadequate command of the French language. Below are a few examples of English words that are currently used as is in France – without raising eyebrows – but that are

25 The Quebec sovereignty movement (French: Mouvement souverainiste du Québec) is a political movement as well as an ideology of values, concepts and ideas that advocates independence for the Canadian province of Quebec. They call it “La révolution tranquille” (The quiet revolution in English).
Barriers to the World’s Linguistic Unification

Language Regulation
decried by the *The Office québécois de la langue française* and, therefore, translated into French in Quebec:

<table>
<thead>
<tr>
<th>English word</th>
<th>French (France)</th>
<th>French (Quebec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>Building</td>
<td>Édifice, bâtiment</td>
</tr>
<tr>
<td>Sticker</td>
<td>Sticker</td>
<td>Autocollant</td>
</tr>
<tr>
<td>Reporter</td>
<td>Reporter</td>
<td>Journaliste</td>
</tr>
<tr>
<td>Mobile home</td>
<td>Mobile home</td>
<td>Maison mobile</td>
</tr>
<tr>
<td>Chicken nugget</td>
<td>Nugget (de poulet)</td>
<td>Pépite de poulet</td>
</tr>
<tr>
<td>Kentucky Fried Chicken (KFC)</td>
<td>Kentucky Fried Chicken (KFC)</td>
<td>Poulet Frit du Kentucky (PFK)</td>
</tr>
<tr>
<td>Freezer</td>
<td>Freezer</td>
<td>Congélateur</td>
</tr>
<tr>
<td>Dealer (of drugs)</td>
<td>Dealer</td>
<td>Trafiquant de drogues</td>
</tr>
<tr>
<td>Success story</td>
<td>Success story</td>
<td>Histoire à succès</td>
</tr>
<tr>
<td>Groove (meaning rhythm or music)</td>
<td>Groove</td>
<td>Rythme, musique</td>
</tr>
<tr>
<td>Hooligan</td>
<td>Hooligan</td>
<td>Voyou</td>
</tr>
<tr>
<td>Warning</td>
<td>Warning</td>
<td>Avertissement</td>
</tr>
<tr>
<td>Loft</td>
<td>Loft</td>
<td>Grenier</td>
</tr>
<tr>
<td>Standing ovation</td>
<td>Standing ovation</td>
<td>Ovation debout</td>
</tr>
<tr>
<td>Remake (of film, play, etc.)</td>
<td>Remake</td>
<td>Version remaniée, reprise</td>
</tr>
<tr>
<td>Smog</td>
<td>Smog</td>
<td>Brouillard</td>
</tr>
<tr>
<td>Tweet</td>
<td>Tweet</td>
<td>Gazouiller(^{26})</td>
</tr>
</tbody>
</table>

Quebec language regulation has also implemented some rules that make it easier for international French speakers living in the province\(^{27}\). First and foremost is the proscription of Anglicism, which works out well for people who don’t know an English word and for the adepts of the separatist movement. Second, using accented capital letters is mandatory. This second rule works for anyone who learned their French outside of Quebec. In France and others French-speaking countries, using accents on capital letters is proscribed. For example, let’s consider these two French sentences, the first one without the accent on the letter *E*, and the second one with the accent on the letter *E*: “JE

\(^{26}\) One day I saw a banner on the facade of one of the halls of Université de Montréal, which was promoting the use of this French word, which I find extremely hilarious when it is used instead of "tweet" but I have never heard anyone use it, although it is an acceptable French word for the actual bird, but not when talking about micro messages sent via Twitter, the social network.

\(^{27}\) But, as you know, for every positive there is a negative. In every international language, some words can mean different things from one country to another. French is no exception to the rule. For example, movie titles, for dubbed films into French, are usually the same in every French-speaking country. But, the 1989 American movie “Honey, I shrunk the kids”, normally translates into “Chérie, j’ai rétréci les gosses” except in Quebec where that translation would have been vulgar, offending, and inappropriate because ‘gosse’, which is a very familiar word for *kids* in almost every French-speaking country, means ‘testicles’ in Quebec (but in a vulgar way, e.g. *balls*), where the movie had to be rendered simply by “Chérie, j’ai réduit les enfants”
MANGE DES BISCUITS SALES” (recommended spelling in France) and “JE MANGE DES BISCUITS SALÉS” (recommended spelling in Quebec). The English translations of the two sentences give respectively: “I’m eating dirty cookies” (for France) but “I’m eating salty cookies” (for Quebec). Here, the Quebec French spelling is more appropriate, as one would have to first investigate in order to figure out the meaning behind the writing, if it’s been done by a French speaker outside of Quebec. The following are just a few examples (among a lot more) where the inclusion or the omission of the accent on capital letters make a difference:

<table>
<thead>
<tr>
<th>Meaning without the accented letter</th>
<th>Meaning with the accented letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>La - (definite article) the; (direct object pronoun) her, it</td>
<td>Là - (adverb) there</td>
</tr>
<tr>
<td>Liquide - liquid</td>
<td>Liquidé - past participle of liquider (to settle, pay; to liquidate, sell off; [inf] to finish off)</td>
</tr>
<tr>
<td>Mais - (conjunction) but</td>
<td>Maïs - corn</td>
</tr>
<tr>
<td>Marche - walking, step, stair</td>
<td>Marché - market; past participle of marcher (to walk, march; to work)</td>
</tr>
<tr>
<td>Masse - mass</td>
<td>Massé - past participle of masser (to assemble, mass, group)</td>
</tr>
<tr>
<td>Mat - checkmate; (adjective) matte, dull</td>
<td>Mât - mast, pole</td>
</tr>
<tr>
<td>Mater - to subdue; (familiar) to ogle; to caulk; (familiar noun) mom, mum</td>
<td>Mâter - to mast</td>
</tr>
<tr>
<td>Mémé - (baby talk) granny</td>
<td>Même - (adverb) same</td>
</tr>
<tr>
<td>Meuble - piece of furniture</td>
<td>Meublé - (adjective) furnished</td>
</tr>
<tr>
<td>Modèle - contours, relief; past participle of modeler (to model, shape, style, mold)</td>
<td>Modèle - model, design</td>
</tr>
<tr>
<td>Mur - wall</td>
<td>Mûr - (adjective) ripe</td>
</tr>
</tbody>
</table>

Despite the efforts, it’s projected that the French language in Quebec will eventually die out, considering that French is a minority language in Canada and its speakers are caught between the rest of Canada, mainly English-speaking and their powerful and influential southern neighbors: The United States. Also, while if in formal settings and in writing, Anglicism is prohibited, in informal settings, it’s a different story. Most Quebeckers are bilingual, and code-switching – the inadvertent use of an English word instead of a French word or vice versa – tends to occur more often during a conversation carried out in French than during a conversation in English. If there is a language that shows that the expansion of a language does not necessarily depend on its strict regulation, it’s English, which is not a regulated language in any country in the world, yet has become the world’s most popular lingua franca.

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28 It should be noted that Quebec is the last bastion of the French language in the Americas. Quebeckers are resilient and have been fighting for nearly 400 years to have their language prevail throughout the province and respected by the rest of Canada. There is no sign of retreat on their part.
Barriers to the World’s Linguistic Unification

Language Regulation

Haiti is to be also considered when analyzing language regulation as a barrier to the emergence of a universal spoken language. They say that if there are two things that will always be non-negotiable for the French, it’s their wine and their language. Quebecers claim French as being inherent to their identity and culture. Haitians have a similar approach to Haitian Creole (Kreyòl Ayisyen), which is spoken by all Haitians living in Haiti (12 million speakers worldwide, including the Haitian diaspora). Creole is, since 1987, one of the official languages of Haiti along with French. Although the language has always had a lower status compared to French, Haitians see it as the language their ancestors spoke – to keep their masters in the dark – in order to access to independence. Thus, Haitian Creole is deeply rooted in the Haitian culture, even though it took the country 183 years\(^\text{29}\) to recognize the importance of Haitian Creole in the day-to-day life of its people and to produce a version of the constitution in a language that 100% of Haitians can speak and understand. That repudiation of Haitian Creole to value and prioritize French instead, prompted Jean-Bertrand Aristide, a defrocked Catholic priest to enact it, through the constitution of 1987, as an official language. Haitian Creole is now taught in schools and is comfortably\(^\text{30}\) the language of the Press (radio, television, and other media), and is recognized as a minority language in the Dominican Republic, Cuba, and the Bahamas because of the large Haitian communities who speak it in these places.

| HAITIAN CONSTITUTION OF 1987 (Abstract regarding Haitian Creole as an official language) |
|---------------------------------------------|---------------------------------|-------------------------------------|
| Kreyòl Ayisyen                               | Français                        | English                             |
| Nimewo 5                                    | Article 5                       | Article 5                           |
| - Sèl lang ki simante tout Ayisyen ansanm, se lang kreyòl. - Kreyòl ak franse, se lang ofisyèl Repiblik d Ayiti. | - Tous les Haïtiens sont unis par une Langue commune : le Créole - Le créole et le français sont les langues officielles de la République | - All Haitians are united by a common language: Creole. - Creole and French are the official languages of the Republic |
| Nimewo 40                                   | Article 40                      | Article 40                          |
| - Leta dwe sèvi ak radyo, ak jounal, ak televizyon pou li gaye bon enfòmasyon, an kreyòl ak an franse, sou tou sa ki an rapò ak vi peyi a. Anwetan sa ki ta yon | - Obligation est faite à l'Etat de donner publicité par voie de presse parlée, écrite et télévisée, en langues créole et française aux lois, arrêtés, décrets, accords | - The State has the obligation to publicize in the oral, written and televised press in the Creole and French languages all laws, orders, decrees, international |

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\(^\text{29}\) That is understandable to some extent since, before becoming a language in its own right, Haitian Creole had to go through the normal processes of pidginization and creolization, which take many generations to complete.

\(^\text{30}\) When I was growing up in Haiti, Creole was spoken by radio and television hosts alike, but with reservation and didn’t have the recognition it now enjoys. Creole was forbidden in most offices and especially in some schools. Addressing the school teachers, the college professors, and other authority figures in French was an implicit norm. At my grade school and my junior high school, the use of Creole was sanctioned by my own colleagues who would pass to each other the special “tokens” provided by the principal to each student (one per student) in the morning. Anyone caught speaking Creole, even not to you directly, was given a token. Having more than one token at the end of the day was punishable by retention.
HAITIAN CONSTITUTION OF 1987 (Abstract regarding Haitian Creole as an official language)
danje pou peyi a, Leta dwe bvay enfòmasyon sou lwa, sou dekrè ak sou regleman li mete deyò. Menm jan tou, pou antant, kontra, ak papye li syen ak lòt peyi.

international, traités, conventions, à tout ce qui touche la vie nationale, exception faite pour les informations relevant de la sécurité nationale.

Agreements, treaties, and conventions on everything affecting the national life, except for information concerning national security.

**Article 213**
- Yon Akademi ayisyen yo dwe etabli yo estandadize lang kreyòl la ak pèmèt li yo devlope syantifikman ak nan lòd.

**Article 213**
- Une Académie haïtienne est instituée en vue de fixer la langue créole et de permettre son développement scientifique et harmonieux.

**Article 213**
- A Haitian Academy shall be established to standardize the Creole language and enable it to develop scientifically and harmoniously.

Haitian Creole is the most spoken creole language in the world and emerged from two linguistic phenomena: language contact and language change. It emerged from language contact when the French language came in contact with African dialects that the slaves took with them to Haiti during colonial time. Because these dialects were as diverse as the slaves themselves (they came from various tribes of Africa), the latter had no choice to take the language of their masters as reference while distorting it to reflect their own idiolects or personal ways of expressing themselves, which explains the process of language change. Generally, a creole language is a language that uses another language as its lexifier. Haitian creole has its roots mainly in French, with a lexicon having more than 90% of its words coming from French, the rest, from the African, Spanish and English dialects. But even if Creole comes from French (most of its words have the same pronunciation as French) Creole and French are not mutually intelligible. In terms of spelling, these Creole words with French pronunciations are spelled differently, which makes Creole a language, with its own grammar, syntax and phonetics. For example, ‘my pen’ is translated literally into ‘pen my’ (plim mwen) into Haitian Creole. The possessive pronoun is inverted and is placed after the object.

<table>
<thead>
<tr>
<th>Haitian Creole</th>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Li ale travay nan maten</td>
<td>Il/elle va au travail le matin</td>
<td>He/she goes to work in the morning</td>
</tr>
<tr>
<td>Li dòmi aswè</td>
<td>Il/elle dort le soir</td>
<td>He/she sleeps at night</td>
</tr>
<tr>
<td>Mwen se yon doktè</td>
<td>Je suis docteur (médecin)</td>
<td>I’m a doctor</td>
</tr>
<tr>
<td>Sa se yon pyebwa mango</td>
<td>Ceci est un manguier</td>
<td>This is a mango tree</td>
</tr>
<tr>
<td>Nou se zanmi</td>
<td>Nous sommes ami(e)s</td>
<td>We are friends</td>
</tr>
<tr>
<td>Mwen konnen kote li ye</td>
<td>Je sais où il/elle est</td>
<td>I know where he/she is</td>
</tr>
</tbody>
</table>

31 A lexifier is the dominant (superstrate) language of a particular pidgin or creole language that provides the basis for the majority of its vocabulary.
Haitian Creole is regulated by a special entity called Akademi Kreyòl Ayisyen (Haitian Creole Academy) established on 4 December 2014 and whose mission is to promote, improve, and preserve the language. According to Haiti Libre, “This installation (of the members) crown the efforts of the Committee set up within the State University of Haiti to put into practice the vow of our Constitution, that our two official languages are used indiscriminately in the country, in a perspective of integration and socioeconomic development.”

<table>
<thead>
<tr>
<th>Examples of Haitian Creole Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mwen konn fè manje</td>
</tr>
<tr>
<td>Li pa konn li franse</td>
</tr>
<tr>
<td>Kòman ou fè pale kreyòl?</td>
</tr>
<tr>
<td>Mwen ta vini si m te gen yon machin</td>
</tr>
</tbody>
</table>

Akademi Kreyòl Ayisyen (Haitian Creole Academy)

31 of the original 33 members of the Academy (2014)

- Motto: Libète, Egalite, Fratènite (Liberty, Equality, Brotherhood)
- Mandate: Regulation of the Haitian Creole

Academy’s logo

Website: akademikreyol.net
In the case of Quebec and Haiti in terms of language regulation as a barrier, it’s important to note that, overall, language regulation creates two principles that can either be official or explicit, or unofficial or implicit in whichever multilingual society it prevails, in terms of linguistic rights. These are the personality principle and the territoriality principle, which both elicit uneasiness in monolingual speakers, depending on his location within the same country, and make linguistic barrier, following language regulation even more obvious. According to the personality principle, a citizen may use whichever language of his choice, wherever he is. The territoriality principle, on the other hand, allows only one language in a specific region. For example, let’s consider a French speaker who does not know an English word and an English speaker who does not know a French word. They both live in Canada. Who, of the two, is at a disadvantage, depending on where they travel within the country? To know who, let’s take a quick look at the Canadian linguistic status quo:

- Both French and English are official languages throughout the Canadian homeland
- The French-only speaker won’t encounter any issues in Quebec and New Brunswick while seeking for both private and public services
- The French-only speaker may not encounter major issues if he is looking for services from government offices outside of Quebec and New Brunswick, because, by law, government employees are required to be bilingual
- The French-only speaker will surely be frustrated when looking for services from non-governmental organizations outside of Quebec and New Brunswick, and people might be looking at him/her like a four-headed alien, as the citizens living in English-speaking Canada does not care much about the French language
- The English-only speaker, however, will not encounter any issues anywhere within the country, as English is a lingua franca in both Quebec and New Brunswick, while French is not a lingua franca in English-speaking Canada. Most Quebecers are bilingual and those who are not, at least understand English

In a nutshell, the personality principle applies to the English-only speaker, while the territoriality principle applies to the French-only speaker. The answer to the question above is: the French speaker because outside of Quebec and New Brunswick, he might be in need of an interpreter\(^\text{32}\).

In Haiti, the personality principle applies to all Haitians, as everyone, wherever throughout the country, may elect to speak either Haitian Creole, or French to whomever is comfortable with the latter. The territoriality principle does not apply to Haiti. Nevertheless, Canada and Haiti have

\(^{32}\) Which explains the legitimacy of the Separatist Movement, whose goal is to set the province of Quebec as a country, and the linguistic war in which Quebecers are engaged. It is indeed frustrating to be linguistically disadvantaged in one’s own country.
something in common in terms of Lingua Franca. In Haiti, even though French is an official language and is largely the language of education and the language of the media, most Haitians speak only Haitian Creole (sometimes by choice, most of the time because of their inability to speak French) considering that French is the native language of not more than 5% of the Haitian population, while French is the native language of more than 80% of Quebecers and is spoken by an overwhelming 96% of the Quebec population. Therefore, French has rather a Lingua Franca status in Haiti, like English is a lingua franca in French Canada. Language regulation in Haiti is carried out for cultural purposes, while in Quebec, it is carried out for politico-cultural purposes.

I was about to conclude this section when the newest case of language regulation surfaced. Although I primarily focused my argument thus far on specific countries such as Canada, Haiti, and the United States (to which countries I’m more accustomed), I thought it might of interest to mention the Ukrainian case as well. Most of you are probably familiar with the taking of Crimea by Russia (March 2014) from Ukraine, where close to 30% of the population are of Russian descent and speak Russian. Three years later (September 2017), in a political move, Ukraine decided to adopt a new law aimed at regulating the languages spoken on its territory. According to Miami Herald, “The law, approved September 5 by the Ukrainian parliament, restructures Ukraine's education system and specifies that Ukrainian must be the main language used in schools, rolling back the option for lessons to be taught in other languages.” This is yet another case of politically-oriented language regulation. The law is explicit, but we still need to wait and see where in Ukraine the personality principle or the territoriality principle will apply implicitly or explicitly. At last, whether in the face of the personality principle or the territoriality principle, language regulation in Haiti, Canada, Ukraine, and anywhere in the world for that matter, causes important disagreements and ambiguities and is certainly a potential major barrier to the prospective of a new language establishing itself as an international native language. (a comprehensive list of countries and regions where multilingualism prevails can be found on page 165 in the “Recommendations” section).

Culture: Cultural linguistics or ethnolinguistics

This is another ambivalent factor. As stated above, ethnolinguistics or cultural linguistics is concerned with the study of the interrelation between a language and the cultural behavior of those who speak it. As Edward Sapir put it in 1929, “Human beings do not live in the objective world alone…but are very much at the mercy of the particular language which has become the medium of expression for their society….The fact of the matter is that the “real world” is to a large extent unconsciously built up on the language habits of the group….We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation.” Terms like cultural diversity, pluralism, cultural synthesis, etc. motivate
speakers of different languages to come together as one, especially if they seek to relate or identity with a dominant culture, but at the same, culture may be the ultimate barrier to language expansion, in that case language adoption by people from different cultures. No matter how influential a language may be, its adoption by different cultures as a second language may be impeded because of pride and prestige displayed by non-native speakers. Asking people to voluntarily abandon their traditional languages, most of the time tethered to their cultures, to adopt a new language is a risky undertaking. Many people see a close relationship between language and culture: “You are what you speak”. Language is used to vehiculate cultural ties (ideas, norms, and values) among a population. For most of us, learning a foreign language might turn out to be a fun experience, but some people wouldn’t dare learn a foreign language even with a gun to their heads. They perceive the experience as traumatic and a betrayal to their own cultures or pretext the fact they may never speak that foreign language as fluently as they speak their native languages. That fear may occur even in native speakers of a language, let alone a speaker of a foreign language. This kind of fear is called linguistic insecurity. According to Wilma Bucci: “Linguistic insecurity refers to feelings of anxiety, self-consciousness, or lack of confidence in the mind of a speaker surrounding the use of their own language. Often, this anxiety comes from speakers' belief that their use of language does not conform to the perceived standard and/or the style of language expected by the speakers' interlocutor(s). Linguistic insecurity is situationally induced and is often a matter of the feeling of inadequacy regarding personal performance in certain contexts, rather than a fixed attribute of an individual. This insecurity can lead to stylistic, and phonetic shifts away from an affected speaker’s default speech variety; these shifts may be performed consciously on the part of the speaker, or may be reflective of an unconscious effort to conform to a more prestigious or context-appropriate style of speech.” Moreover, many people think that language diversity is a microelement of humans’ inherent individuality, meaning the human species is meant to be diverse and be able to retain its individuality. Proponents of this view embrace the ecolinguistic approach, which consist in – reflecting the notion of ecology in biological studies – the interaction between language and the cultural environment is seen as central; also called the ecology of language, ecological linguistics, and sometimes green linguistics. An ecolinguistic approach highlights the value of linguistic diversity in the world, the importance of individual and community linguistic rights, and the role of language attitudes, language awareness, language variety, and language change in fostering a culture of communicative peace. *Ethnolinguistics or Anthropological linguistics* considers also that relationship. According to Encyclopedia Britannica: “Ethnolinguistics, is that part of anthropological linguistics concerned with the study of the interrelation between a language and the cultural behavior of those who speak it. Several controversial questions are involved in this field: Does language shape culture or vice versa? What influence does language have on perception and thought? How do language patterns relate to cultural patterns? We saw how the quest for cultural diversity led to the breakup of Latin and the emergence of the Romance languages.”
On the other hand, the question of linguistic identity, even within the same culture, may create some friction or linguistic conflict. Examples include linguistic prestige, status, and diglossia. In sociolinguistics, “prestige is the level of regard normally accorded a specific language or dialect within a speech community, relative to other languages or dialects. The concept of prestige in sociolinguistics provides one explanation for the phenomenon of variation in form, among speakers of a language or languages.” A language’s prestige is linked to its speakers’ social status or class. Linguistic prestige comes with power, influence, and legislation. In a culture where a dialect of the national language is spoken by people of lower class, that dialect will have a lower status compare to the main language. Such a situation is defined as diglossia. For example, Ebonics is proscribed because it’s spoken by poor African-Americans. What is called good English is called good because it was legislated to be used as the main and proper English to speak and write. Other cases include the Haitian creole and standard French in Haiti. Although today, both languages are official languages of Haiti, Creole still has a lower status than French because up until 1987, before Jean-Bertrand Aristide came to power, Haiti had one official language: French, and it was spoken mainly by literate and schooled people while the majority of the population spoke Creole, which, to this day, is still the only language of most Haitians.

Quebec (Canada) experiences diglossia as well. Joulal33 is a dialect of French still spoken today by a minority of Quebecers who do not have a formal education, but advocate for Joulal to become the true language of the province. Today, most Quebecers have moved on to adopt the international and standard French as their primary language. According to Université Laval, “The word joulal comes from horse pronounced [jwal] as in French of the seventeenth century. The term joulal is used in Quebec to refer broadly to the linguistic, grammatical, syntactic and lexical differences (including anglicisms) of Canadian popular French, either to stigmatize them or to make them a symbol of identity. Historically, the ‘Quebecer joulal’ comes from French, a mixture of archaic French, popular French, and a number of anglicisms. In this sense, joulal is historically a ‘dialect of French’ ... The events of the Quiet Revolution threw the linguistic question into the forefront of Quebec, which ceased to be a question of language in order to become ideological, demographic, educational, economic and political issues. In fact, governments did not intervene in the linguistic field, but all the main ideas of a language policy emerged at that time and prepared the 'epoch of linguistic laws' that would follow ... Traditional Quebec society had lagged behind the rest of the western world and had to catch up with it. From a linguistic point of view, this resulted in an increase in purism with regard to the French language, that is, an excessive concern for the purity of the language. French spoken in Quebec was so 'backward', 'degraded' and 'corrupted' by English that it was urgent to renew the umbilical cord with the motherland (France), the only force able to defeat this 'endemic' contamination and to block assimilation.”

33 Today, the word joulal is rarely applied to the variety of French spoken in Québec. More neutral terms, such as Québécois, Québécois French, Québec French, and vernacular French from Québec, are preferred.
Cultural linguistics does not manifest itself only in the case of diglossia. Normally, people are proud of their traditional languages\(^{34}\). Although English isn’t a regulated language, English speakers are proud to refer to it as ‘the language of Shakespeare’; French speakers refer to French as ‘the language of Malherbe’ (and sometimes of Molière); and Spanish speakers refer to Spanish as ‘the language of Cervantes’, etc. I mentioned language attitude above to explain that. Language attitudes may force speakers to interpret any influence of another language as a threat and stand ready to oppose it. This is called language loyalty, a term used in sociolinguistics referring to a concern to preserve the use of a language or the traditional form of a language, when that language is perceived to be under threat. For example, many first-generation immigrants to a country are extremely loyal to their first language, but attitudes vary in the second generation. Language loyalty normally gives rise to language maintenance, referring to the extent to which people continue to use a language once they are part of a community in which another language has a dominant position. For example, immigrant groups may maintain their language, out of a sense of language loyalty, despite the dominance of the language of their host country (as has often happened in the USA); or a community may continue with its language successfully despite the presence of a conquering nation (as happened with English after the Norman Conquest).

Moreover, because a variant of a language within the same culture, even with presence of a regulating body of the main language can emerge and wins unofficial recognition, especially when children and adolescents show interest thereof. I stated earlier that the French language, within continental France is uniform with the exception of a few minority dialects and Provençal spoken in southeastern France. However, within the context of cultural linguistics, it’s important to note that there is a popular form of slang, called Verlan, spoken mainly by young people throughout France. Verlan is an argot (slang) in the French language, featuring inversion of syllables in a word, and is common in slang and youth language. It rests on a long French tradition of transposing syllables of individual words to create slang words. The word Verlan itself is a verlan word. It’s the phonetic inversion of the proper French word l’envers, which means backwards or upside down. The slang is widespread in France and deeply rooted in French culture. One might find it impossible to understand a typical conversation among teenagers, especially if they don’t want to be understood. Being a native French speaker, even from France does not guarantee the understanding of Verlan. A new universal single language may not be able to suppress such local and spontaneous tendencies. Below are a few examples of Verlan words:

34 “In the early 1920s, there was a proposal for the League of Nations to accept Esperanto as their working language. It almost went through, with ten delegates accepting and only one dissenting. The dissenting voice was that of the French delegate, Gabriel Hanotaux. Hanotaux felt that the French language was losing its position as the international language and saw Esperanto as a threat to its position (a threat that would very soon be replaced by English, especially when it comes to tech-related words.) While the proposal was never accepted, the League did acknowledge that the language was worth learning, recommended that its member states include Esperanto in their educational curricula.”
That shows how people can be so attached to their cultures and their languages that it becomes impossible to motivate them to be open to another language. In other words, during the process of making the world monolingual – if that ever takes hold, cultural linguistics could stand as an important barrier between any form of language expansion movement and local populations. A linguistic phenomenon, like Verlan, precisely might take place especially among people who might oppose the new single native language. As a reminder, people use language to display or assert their identity (Quebec, Canada). People invent new languages to resist to an established authority. For example, the hundreds of thousands of African people who were taken out of their homelands and brought to the Americas came from many different tribes in Africa, didn’t speak the same languages, and therefore couldn’t understand each other. They took the languages of their masters as reference, distorted it, and turned it into a pidgin only they could understand. These pidgins became lingua francas. Then, the children and the grand children of the slaves turned those pidgins into creole languages that are spoken by current generations alongside of the main languages. This phenomenon occurred in Haiti, Brazil, and the African colonies of Europe. Verlan, in France, isn’t tethered to slavery, but was initially a language of opposition spoken by immigrants and the culturally disadvantaged before being widely accepted and became part of French culture. “Verlan became so popular that even former French President François Mitterrand showed off his knowledge of it during a television interview […] When he was asked whether he knew the word chébran (Verlan for branché, which means hip), he answered, of course, but added, ‘That is already passé; you should say câblé,’ which literally means ‘wired for cable,’ but means ‘plugged in’ or with-it in current slang.” Needless to say that creolization and cultural linguistic opposition are two elements that should not be overlook during the creation or the natural emergence of a universal and single native language.

Under actives initiatives aiming at the linguistic unification of the world, I cited sign language as one of the initiatives, although that may seem a little bit odd before reading my points. Sign language is not impervious to cultural barriers. Frances Stead Sellers, in her article Sign language that African Americans use is different from that of whites, tells an interesting story, which is truly a tale of two sign languages. Here is an excerpt thereof:
“Carolyn McCaskill remembers exactly when she discovered that she couldn’t understand white people. It was 1968, she was 15 years old, and she and nine other deaf black students had just enrolled in an integrated school for the deaf in Talledega, Ala.

When the teacher got up to address the class, McCaskill was lost.

“I was dumbfounded,” McCaskill recalls through an interpreter. “I was like, ‘What in the world is going on?’”

The teacher’s quicksilver hand movements looked little like the sign language McCaskill had grown up using at home with her two deaf siblings and had practiced at the Alabama School for the Negro Deaf and Blind, just a few miles away. It wasn’t a simple matter of people at the new school using unfamiliar vocabulary; they made hand movements for everyday words that looked foreign to McCaskill and her fellow black students.

So, McCaskill says, “I put my signs aside.” She learned entirely new signs for such common nouns as “shoe” and “school.” She began to communicate words such as “why” and “don’t know” with one hand instead of two as she and her black friends had always done. She copied the white students who lowered their hands to make the signs for “what for” and “know” closer to their chins than to their foreheads. And she imitated the way white students mouthed words at the same time as they made manual signs for them.

Whenever she went home, McCaskill carefully switched back to her old way of communicating.

What intrigues McCaskill and other experts in deaf culture today is the degree to which distinct signing systems — one for whites and another for blacks — evolved and continue to coexist, even at Gallaudet University, where black and white students study and socialize together and where McCaskill is now a professor of deaf studies.

Five years ago, with grants from the National Science Foundation and the Spencer Foundation, McCaskill and three fellow researchers began to investigate the distinctive structure and grammar of Black American Sign Language, or Black ASL, in much the way that linguists have studied spoken African American English (known by linguists as AAE or, more popularly, as Ebonics). Their study, which assembled and analyzed data from filmed conversations and interviews with 96 subjects in six states, is the first formal attempt to describe Black ASL and resulted in the publication last year of “The Hidden Treasure of Black ASL.” What the researchers have found is a rich signing system that reflects both a history of segregation and the ongoing influence of spoken black English.

The book and its accompanying DVD emphasize that Black ASL is not just a slang form of signing. Instead, think of the two signing systems as comparable to American and British English: similar but with differences that follow regular patterns and a lot of variation in individual usage. In fact,
says Ceil Lucas, one of McCaskill's co-authors and a professor of linguistics at Gallaudet, Black ASL could be considered the purer of the two forms, closer in some ways to the system that Thomas Hopkins Gallaudet promulgated when he founded the first U.S. school for the deaf — known at the time as the American Asylum for Deaf Mutes — in Hartford, Conn., in 1817.

Mercedes Hunter, a hearing African American student in the department of interpretation at Gallaudet, describes the signing she and her fellow students use as a form of self-expression. “We include our culture in our signing,” says Hunter, who was a research assistant for the project, “our own unique flavor.”

“We make our signs bigger, with more body language” she adds, alluding to what the researchers refer to as Black ASL’s larger ‘signing space.’”

Illiteracy

Illiteracy is referred to as the inability to read or write or the lack of knowledge in a particular subject, or ignorance. Whether people are unable to read or write, or simply don’t know much about linguistics could be serious barriers to the promotion of a new or existing international native language. Generally, people are reluctant to change. With regard to linguistics, why would someone be interested in a new language when they cannot even read nor write their own native language? First, let’s consider illiteracy in the sense of the inability to read or write. Today, in all industrialized nations illiteracy is relatively eradicated. Paradoxically, illiteracy is still present in places where one would least expect it. For example, in her article, Illiteracy in Quebec Becoming a Massive Problem in The Province, Catherine Lévesque writes: “In recent years, the Province of Quebec has proven to be a poor student. It ranks next-to-last in Canada in terms of literacy, despite the fact that school has been mandatory until age 16 since 1988. Approximately 53 per cent of the population do not reach the necessary threshold to function properly in a society that each year is becoming increasingly complex. And among that percentage, 19 per cent are unable to read and write. Over half of Québécois have difficulty understanding the meaning of a 300-word article from the Journal de Montréal. Some are unable to read a doctor's prescription, or even understand the map of the metro in Montreal.”

The United States is not impervious to illiteracy either. On December 12, 201335, the HuffPost began their article The U.S. Illiteracy Rate Hasn’t Changed In 10 Years in these terms: “Sunday is International Literacy Day! We recommend taking the opportunity to curl up with a warm cup

35 Initially published on September 6, 2013.
of coffee, a comfy chair, and a favorite classic. Of course, this holiday is bittersweet – We know we’ll be celebrating accordingly, but many Americans won’t be able to do so. ” They also reported further that, “According to a study conducted in late April by the U.S. Department of Education and the National Institute of Literacy, 32 million adults in the U.S. can’t read. That is 14 percent of the population. 21 percent of adults in the U.S. read below a 5th grade level, and 19 percent of high school graduates can’t read...The current literacy rate isn’t any better than it was 10 years ago. According to the National Assessment of Adult Literacy (completed most recently in 2003, and before that, in 1992), 14 percent of adult Americans demonstrated a 'below basic' literacy level in 2003, and 29 percent exhibited a 'basic' reading level.”

The problematic is even worst in developing nations, which are still struggling with high illiteracy rates. World atlas suggests that “though literacy on a national or global scale has not always been historically significant, today we recognize literacy as a basic human right and organizations all over the world are pushing towards increasing the literacy rate of all countries worldwide. Being able to read and write not only empowers a person but also opens a whole new world of opportunities that is required in order to abolish poverty, and eliminate hunger, and see any progress in the human species overall.”

“According to an infographic released by the UNESCO Institute for Statistics in 2013, 52% of the 774 million illiterate people who are 15 years and older are based in West and South Asia. As of
2015, these regions have 70.2% literacy rates, while sub-Saharan Africa has 64%. South Sudan ranks lowest of them all, with a literacy rate of just 27%, followed by Afghanistan at 28.1%, Burkina Faso at 28.7%, Niger at 28.7%, Mali at 33.4%, Chad at 35.4%, Somalia at 37.8%, Ethiopia at 39%, Guinea at 41% and Benin at 42.4%. Further analysis of UNESCO’s statistics details that of the 774 million illiterate adults recorded in 2013, two thirds of these, or about 493 million, are women who are unable or have difficulties reading text messages, filling out forms and reading their doctor’s prescription. Furthermore, there are 123 million people between 15 and 24 years of age who cannot read or write. Of these illiterate youth, 76 million are women and 54 million of them are based in only nine countries: India, Pakistan, Nigeria, Ethiopia, Bangladesh, Democratic Republic of Congo, United Republic of Tanzania, Egypt and Burkina Faso.”

On the other hand, when we consider the second meaning of illiteracy: lack of knowledge in a particular subject, in this case, obviously, lack of knowledge in linguistics or simply a foreign language, we can’t help from asking: how will those unfortunate people ever master the basic rules of grammar since they are illiterate. A universal language would most likely be a constructed or an artificial language taught in school. In those parts of the world with low literacy rates, the language would quickly change into dialects or creole languages with their own characteristics, if it’s accepted at all.

................................
5. RECOMMENDATIONS

If left only to the dynamics of languages, the monolingualism of the Earth may never happen for languages follow the environment and is as dynamic as the environment. Present generations may have to take more concrete and permanent steps so that the importance of one language for one world motto becomes deeply rooted in our mindsets. Listed below are the steps or initiatives that I think may bring to bear the importance of a single global native language with the potential to guarantee the greatest good for the greatest number of people.

Getting there fast but democratically, inclusively, and pluralistically

In case the new language is a constructed one, it would better have roots that are as diverse as possible, meaning it must reflect virtually all the currently spoken languages on the planet, as opposed to Esperanto and Interlingua, which is one of the reasons why these artificial languages failed for that matter. Esperanto failed because it reflected mostly the environment and the languages (Indo-European) to which its creator, L.L. Zamenhof, was exposed to. Among these languages (as seen above): Yiddish, Russian, German, French, Belarusian, Latin, Greek, Hebrew, and Aramaic. Esperanto left out the other major types of languages such as: Amerindian, Chamito, Niger-Congo, Bantu, Uralo-Altaic. Sino-Thai, Dravidian, and Austronesian languages. Therefore, it’s no wonder that the speakers of these languages feel that they are not represented and become uninterested in Esperanto all together.

As for Interlingua, it failed because not only it is a language constructed primarily for scientists, who tend to publish their works in the currently most popular language knowing that their research is more likely to be read by the greatest number of people, but also, it’s mainly based on the Romance languages (French, Italian, Spanish, Portuguese, and Romanian). That was a miscalculation because today, children around the world are exposed to science and technology at a very early age, each in their native language.

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36 Zamenhof was born on December 15, 1859 in Bialystok, Poland, which was, at that time, part of the former Russian Empire. His parents were of Polish-Lithuanian Jewish descent that inhabited the central part of the former Polish-Lithuanian Commonwealth. According to Christer Kiselman and Claude Piron, he appears to have been natively bilingual in Yiddish and Russian (Polish language was restricted and forbidden in public conversations by the Tsarist authorities), presumably the Belarusian language of his home town, though it may have been only his father who spoke Russian with him at home. From his father, a teacher of German and French, he learned those languages and Hebrew as well. Despite this he spoke Polish, one of the major languages of Bialystok alongside Yiddish, Belarusian, and German, and it was Polish that was to become the native language of his children after settling in the Kingdom of Poland. In school, he studied the classical languages: Latin, Greek, Hebrew, and Aramaic. He later learned some English, though in his own words not very well, had an interest in Lithuanian and Italian, and learned Volapük when it came out in 1880, though by that point his international language project was already well developed.
To avoid the mistakes made by Esperanto and Interlingua, the new language would have to be inclusive and be much more diverse. It must reflect the percentage of the world’s population that the number of speakers of each language type represent, as shown by the table below:

<table>
<thead>
<tr>
<th>Type of language*</th>
<th>Approximate Number of speakers (native and second speakers) in 2017**</th>
<th>% reflected by new language’s syntax and lexicon according to world population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amerindian</td>
<td>100 million</td>
<td>1.33%</td>
</tr>
<tr>
<td>Austronesian</td>
<td>450 million</td>
<td>6%</td>
</tr>
<tr>
<td>Bantu</td>
<td>500 million</td>
<td>6.7%</td>
</tr>
<tr>
<td>Chamito or Afro-Asiatic</td>
<td>750 million</td>
<td>10%</td>
</tr>
<tr>
<td>Dravidian</td>
<td>500 million</td>
<td>6.7%</td>
</tr>
<tr>
<td>Indo-European</td>
<td>2.6 billion</td>
<td>35%</td>
</tr>
<tr>
<td>Niger-Congo</td>
<td>750 million</td>
<td>10%</td>
</tr>
<tr>
<td>Sino-Thai</td>
<td>1.5 billion</td>
<td>20%</td>
</tr>
<tr>
<td>Uralo-Altaic</td>
<td>300 million</td>
<td>4%</td>
</tr>
</tbody>
</table>

*These types of languages are described above in the section “Characteristics of language use at the geolinguistic level”
**These numbers are highly approximative and used only as suggestions for explanation purposes, but still reflect the least spoken to the most spoken types of languages.

The new language would include 35% of Indo-European languages, 20% of Sino-Thai languages, and only 1.33% of Amerindian languages, which means during the first three generations, the level of difficulty would be the greatest for the Amerindians, mild for the people who speak Sino-Thai languages, and manageable for those who speak Indo-European languages. Even at 35% Indo-European, the syntax and the lexicon of the new language would still be a far cry from both Esperanto and Interlingua, whose lexicons are comprised of 100% Indo-European languages. Either way, it wouldn’t take long for the levels of difficulty disappear.

Combining currently spoken world languages into a common language would come with its challenges, especially in terms of phonetics and morphology. Tone languages like Mandarin, pitch languages like Japanese, accented languages like Spanish, and non-tonal languages like French or English, each has their particularities when it comes to phonetics and morphology. To resolve this problematic, I think an alphabet similar to that of the International Phonetic Alphabet could be created, as all spoken languages have sound as a common denominator and shape as a common property in their written forms.

Inclusion according to language type is appropriate in the sense that it gives a broad view of the linguistic distribution map of the world. But, the consideration of specific languages in the sense of well-defined or well-structured languages spoken by one or more countries would also be in order. The chart below gives a synoptic view of the world’s major languages and their number of speakers.
According to the Washington Post, “Chinese has more native speakers than any other language, followed by Hindi and Urdu, which have the same linguistic origins in northern India. English comes next with 527 million native speakers. Arabic is used by nearly 100 million more native speakers than Spanish […] The numbers are fascinating because they reflect the fact that two-thirds of the world's population share only 12 native languages. Those numbers were recently published by the University of Düsseldorf’s Ulrich Ammon, who conducted a 15-year-long study.
[...] His numbers are surprising, compared with the ones featured in the CIA’s Factbook. According to the CIA, Spanish is spoken by 4.85 percent of the world's population and its use is even more widespread than English, which is spoken by 4.83 percent. However, the CIA numbers include only first native languages. Many people are bilingual, and whereas Spanish might be their first native language, English could be their second one. Ammon counts both first and second native language speakers [...] The number for Portuguese is smaller than other sources suggest because not all Brazilians are native speakers. Some might also be surprised that Korean or Punjabi do not show up on the list: Indeed, both are nearly as widely spoken as Italian.”

Because the new language would be the official language of every country, it would be taught to children around the world and would become the norm. However, way before we get there, we would need to first accept every culture and every language in their diversity. As I explained above, Asia and Africa lead in terms of the number of spoken languages. UNESCO, in Why and how Africa should invest in African languages and multilingual education – An evidence- and practice-based policy advocacy brief, says that “Africa’s multilingualism and cultural diversity is an asset that must, at long last, be put to use. Multilingualism is normality in Africa. In fact, multilingualism is the norm everywhere. It is neither a threat nor a burden. It is not a problem that might isolate the continent from knowledge and the emergence of knowledge-based economies, conveyed through international languages of wider communication. Consequently, the choice of languages, their recognition and sequencing in the education system, the development of their expressive potential, and their accessibility to a wider audience should not follow an either-or principle but should rather be a gradual, concentric and all-inclusive approach.” The table below shows a synoptic view of language diversity in the world:

<table>
<thead>
<tr>
<th>Region</th>
<th>Living Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>2,301</td>
</tr>
<tr>
<td>Africa</td>
<td>2,138</td>
</tr>
<tr>
<td>Pacific</td>
<td>1,313</td>
</tr>
<tr>
<td>Americas</td>
<td>1,064</td>
</tr>
<tr>
<td>Europe</td>
<td>286</td>
</tr>
</tbody>
</table>

Sources: Ethnologue: Languages of the World, Eighteenth edition, THE WASHINGTON POST
What makes it a little bit difficult is that most spoken languages don’t necessarily mean most popular. In terms of popularity, we need to consider the number of countries in which a langue is spoken, as shown by this figure:

![Number of countries in which this language is spoken](image)

This confirms the fact that we would need to construct the new language according to the table: “New language’s composition according to world population above” above. The acceptance of a new language as a global native language may not be unanimous (at least in the beginning) for that matter. The following is an excerpt of UNESCO’s philosophy regarding cultural and linguistic diversity:

“UNESCO promotes the ‘fruitful diversity of cultures’ since the creation of its Constitution in 1945. Its mandate was reaffirmed in the 2001 Universal Declaration on Cultural Diversity. Cultural diversity is stated ‘as necessary for humankind as biodiversity is for nature’ (Article 1). This principle should be understood not only in terms of economic growth but also as a means to achieve
Recommendations

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a more satisfactory intellectual, emotional, moral and spiritual existence (Article 3). It also implies a commitment to Human Rights and Fundamental Freedom, in particular those of Indigenous Peoples. (Article 4). To favor cultural diversity UNESCO has developed various standards that offer spaces to promote indigenous peoples’ cultural rights and foster direct engagement with them:

- Protection and Promotion of the Diversity of Cultural Expressions
- Safeguarding of the Intangible Cultural Heritage
- Protection of the Underwater Cultural Heritage
- Protection of the World Cultural and Natural Heritage
- Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property
- Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention
- Universal Copyright Convention

Another domain that is of strategic importance is linguistic diversity and multilingualism that UNESCO promotes in all fields of its mandate, through an interdisciplinary approach involving all programme sectors: education, culture, science, communication and information and social and human sciences.

Languages, with their complex implications for identity, communication, social integration, education and development, are of strategic importance for people and the planet. There is growing awareness that languages play a vital role in development, not only in ensuring cultural diversity and intercultural dialogue, but also in attaining quality education for all and strengthening cooperation, in building inclusive knowledge societies and preserving cultural heritage, and in mobilizing political will for applying the benefits of science and technology to sustainable development.

UNESCO is thus taking urgent action to encourage broad and international commitment to promoting multilingualism and linguistic diversity, including the safeguarding of endangered languages. to explain and protect its philosophy, UNESCO has published a variety of documents, including:

- UNESCO World Report on Cultural Diversity
- UNESCO and Indigenous Peoples: Partnership for Cultural Diversity
- Endangered languages
- Languages in Education
- Linguistic Diversity and Multilingualism on Internet
- Biodiversity and Linguistic Diversity”
Their position on linguistic diversity is unequivocal, as shown on their website, reflected by the table below:

<table>
<thead>
<tr>
<th>Linguistic diversity and multilingualism on Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasingly, information and knowledge are key determinants of wealth creation, social transformation and human development. Language is a primary vector for communicating information and knowledge, thus the opportunity to use one’s language on the Internet will determine the extent to which one can participate in emerging knowledge societies.</td>
</tr>
</tbody>
</table>

The beginning of the Internet has brought about diverse opportunities for sharing information and knowledge in various languages. Today, anyone in principle can produce content, share it with the rest of the world and receive feedback. In principle, the Internet is open to all languages of the world when certain technical conditions are met, and when the necessary human and financial resources are in place.

However, many languages are not present on the Internet. There is a vast linguistic divide, which exists in cyberspace today and this will only exacerbate the digital divide. Everyone therefore should have access to the multilingual Internet. Nations, communities and individuals without access to the Internet and its resources will certainly be marginalized with limited access to information and knowledge, which are critical elements of sustainable development. Speakers of non-dominant languages need to be able to express themselves in culturally meaningful ways, create their own cultural content in local languages and share through cyberspace. The digital divide has two important aspects: firstly, everyone should have access to the Internet, and secondly, access to quality content created not only at international or regional level, but locally and in local languages. The Internet is multilingual and culturally diverse where every culture and language has its own space.

UNESCO is convinced that cultural diversity and multilingualism on the Internet have a key role to play in fostering pluralistic, equitable, open and inclusive knowledge societies. UNESCO encourages its Member States to develop comprehensive language-related policies, to allocate resources and use appropriate tools in order to promote and facilitate linguistic diversity and multilingualism, including the Internet and media. In this regard, the Organization supports the inclusion of new languages in the digital world, the creation and dissemination of content in local languages on the Internet and mass communication channels, and encourages multilingual access to digital resources in the cyberspace.

<table>
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<tbody>
<tr>
<td>The “Multilingualism in Cyberspace: Indigenous Languages for Empowerment” International Conference seeks to support sustainable processes of awareness raising about the need for multilingualism in Cyberspace, understanding access to information as a Human Right for indigenous groups, knowledge sharing of best practices for indigenous languages in cyberspace and capacity building for communities especially with endangered languages.</td>
</tr>
</tbody>
</table>
Linguistic diversity and multilingualism on Internet

This regional conference for Central America underlines the fact that many Indigenous languages are in danger. It will strengthen the right for access to information in cyberspace for indigenous communities and will stimulate communities of indigenous languages in danger to work on their presence in Internet with linguistic support for digital documentation of oral traditions.

As an objective of the conference, a plan of action will be elaborated to address the above terms also in support of availability of hardware and software solutions to facilitate man-machine-interaction in different linguistic and cultural settings, facilitating the use of appropriate keyboards, translation with vocabulary lists and spelling check, voice recognition, etc.

As you can see, language diversity or multilingualism has some important and influent adepts. At the same time, many may still view it as an inconvenience in terms of proficiency, time, and confusion. Being 100% proficient in several languages is a daunting task, if not impossible. It takes a long time to learn a foreign language and you may never speak it at the same level as your own native language. Confusion is another concern for many polyglots. Differentiating among the different vocabularies all the time is confusing, and code-switching isn’t uncommon. But, let’s be honest, if everyone on the planet spoke the same language, things would have been a lot easier. For the speaker of many languages, sometimes, he/she might miss a point because it’s lost in translation. At the other end, your interlocutor, who speaks fluently the language in which you’re talking to him with an accent might miss a point as well because, even if in the beginning of the conversation he strives to pay attention to the content of what you’re saying, after a while, he unwillingly loses interest and starts paying attention to the form, meaning your accent, which can lead to aggravation and frustration on both end of the spectrum.

The idea of visiting a foreign country with no knowledge of the local language might sound exciting and challenging at the same time. While the saying “Conquer your fears, and improvise” might motivate the potential tourist, once you set foot in that country, frustration will not be long to set in. with English being an international lingua franca and the universal language of science, most English speakers tend to expect everybody to speak English no matter which country they’re visiting. In fact, that does not always happen as expected. Some locals do expect foreigners to at least try to speak their languages; and if they see that your case is desperate, they will then try to help you in English. In the Quora’s online forum, someone asked the following question: “Why do French people expect tourists to speak French and get angry when you don’t? When we said, ‘Je ne pas parlais Francais,’ they just talking, saying something like, ‘When you are in France, speak French.’ We were shocked. This happened 3 times.” and Nadège Rouyère, who lives in France, replied: “I am French. And no, I don’t expect foreigners to speak French. BUT I find it quite rude when someone stops me in the street and starts to speak English/German/Spanish/etc… very fast ASSUMING I understand/speak his language and does not make an effort to say at least “Bonjour”. And a “je ne parle pas français…” would be even better.
5. Recommendations

I have the chance to speak English not too badly as I have lived in the UK. Please note that languages are taught badly in French schools. Very poor. So even if most French people have studied English at least for 3 years when they were at school, believe me they won’t understand you unless you speak very slowly or say “Where is Brian? Brian is in the kitchen....” (private joke for the French in their 50s). Gesture helps a lot. And we will be so happy to help you if you at least make an effort to be understood by showing, drawing, miming.... :)

When I visit a foreign country, I always try to learn the basics beforehand (“hello”, “excuse me”, “thank you”, “the station” .... etc). I work in France next to the German boarder and live in Germany from nonday to friday. I have studied German for 12 years but stopped practicing when I left school. Now when I do my shopping, I try to speak German a little bit. And believe me: people in the shops are much more friendly to me than to the French who do not even try and directly address them in French, assuming that they SHOULD speak French. Even if I only can say “Hallo”, “Danke shön”, “Bitte” and try to remind me some words. Some Germans even let me try and reply to me in perfect French with a smile and a wink. Or even give me the correct sentence or word or term."

A single and global language might beget more transparency and honesty amongst people from all walks of life or nationalities by eliminating assumption that since Mr./Ms. so and so does not speak your language, you may have any conversation you want with someone else in his/her presence. That is illustrated by the following example: to the question: “What conversations have you overheard in a language they assumed you don't know?”, Lora Ann Potts (St. Louis, Missouri) answered: “A few years ago at the library by my home a man from the Caribbean used to visit several times a week. I do not know which country in the Caribbean he was from because whenever anyone asked he just said, “I’m from the Caribbean.” My best guess is he was from Haiti. There was also a librarian from Quebec. She must have been fairly new there though because I only saw her for the first time a few days to a week before this conversation. The man, on the other hand, had been a regular for at least a few months.

So, one day I was using the computers and the Caribbean man was two computers down from me. The librarian happened to walk past and he started speaking to her in French. My ears perk up because random French speakers are a bit of an anomaly in North St. Louis County.

Now from what I gathered from their conversation this was the first time they had ever spoken to each other so I’m not sure how he knew to speak French with her. Perhaps someone had told him prior to this conversation.

There was a lot of first time conversation topics they went through. Where are you from? What was moving to the US/Missouri/St. Louis like for you? How long have you been here? etc...etc...
They noticed me eavesdropping a number of times so I tried playing it off. Suddenly, I am very interested in the computer screen :)

Towards the end of their exchange, I must have been quite a bit too obvious because they commented on it.

Her: He thinks we are speaking Spanish.

HIM: All Americans think foreigners speak Spanish.

Me: (trying and failing at not laughing out loud)

That gave them pause but then they continued. I have no idea if they realized I understood every word :)

Because of unintended rudeness both from tourists and locals, and, on the other hand, because people might be vulnerable without their knowledge since they don’t speak a foreign language, a monolingual world is more than ever desirable.

Joint international linguistic awareness campaign

• Reasons for the campaign

“A single language for a better world” could be a common motto for several charity organizations, the United Nations and its umbrella organizations, gatekeepers of education such as public libraries across the world, publishers, editors, educators, speechwriters, journalists, schools, colleges, and universities around the world. A campaign would be required especially in the case of a constructed language. Interlingua, as the suggested language of science, didn’t take hold because it wasn’t popularized enough. Esperanto suffered the same fate because of lack of popularity and, thus, lack of interest from the world’s population. Social networks and major religions could join in the promotion efforts. Language awareness is a “term used especially in educational linguistics, to refer to an informed, sensitive and critical response to the use of language by oneself and others, including the awareness of relevant terminology (metalinguistic awareness). A particular impetus was given to the task of promoting linguistic awareness in the early 1990s, when new perspectives on language teaching in schools came to be adopted in several countries.” The Association for Language Awareness (ALA) defines language awareness as “explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use... it covers a wide spectrum of fields. For example, Language Awareness issues include exploring the benefits that can be derived from developing a good knowledge about language, a
conscious understanding of how languages work, of how people learn them and use them…”

Language awareness, according to ALA, is relevant for the learner, the teacher, the teacher-learner, the bilingual and the layperson.

The above-mentioned entities could turn themselves into macrolinguistic agencies, which would be monitoring, on the one hand, microlinguistics itself, which consists of phonetics, phonology, morphology, and syntax, and, on the other hand, metalinguistics, which would concern the relationship between the new language and world societies. Finally, as part of the joint international campaign awareness, the establishment of an *Earth Linguistic Unification Day* might serve as a catalyst (the same way there is an *International Mother Language Day* designated by UNESCO on 17 November 1999 and commemorated on 21 February of each year).

One of the reasons for the campaign would be to popularize arguments in favor of international monolinguism. The campaign would need to raise awareness about the fact that while language diversity is part of our cultures, multilingualism does have drawbacks in that it causes delays in international communications and can also be a barrier when interacting with people from different cultures. The goal of the campaign is not to overlook the close relationship that exists between language and culture but rather to stress the importance of bridging significant cultural gaps by synthetizing the languages of our world into one. The campaign could advance meaningful arguments such as: “Whereas most people master their native language with unconscious ease, individuals vary in their ability to learn additional languages, just as they vary in other intellectual activities. Situational motivation, however, appears to be by far the strongest influence on the speed and apparent ease of this learning. The greatest difficulty is experienced by those who learn because they are told to or are expected to, without supporting reasons that they can justify. Given a motive other than external compulsion or expectation, the task is achieved much more easily (this, of course, is an observation in no way confined to language learning). In Welsh schools, for instance, it has been found that English children make slower progress in Welsh when their only apparent reason for learning Welsh is that there are Welsh classes. Welsh children, on the other hand, make rapid progress in English, the language of most further education, the newspapers, most television and radio, most of the better-paid jobs, and any job outside Welsh-speaking areas. Similar differences in motivation have accounted for the excellent standard of English, French, and German acquired by educated persons in the Scandinavian countries and in the Netherlands, small countries whose languages, being spoken by relatively few foreigners, are of little use in international communication. This attainment may be compared with the much poorer showing in second-language acquisition among comparably educated persons in England and the United States, who have for long been able to rely on foreigners accommodating to their ignorance by speaking and understanding English […] It is sometimes held that children brought up bilingually in places in which two languages are regularly
in use are slower in schoolwork than comparable monolingual children, as a greater amount of mental effort has to be expended in the mastery of two languages.” *(Britannica).*

While the above arguments do not apply to everybody – indeed there is evidence to the contrary – they have been proven to be true in some cases. On the other hand, the argument of the relationship between language and culture – as shown above – can be put forth differently to make the case for a universal language. The instigators of the single and global language that every human being would use as a native language would need to argue that we all can share a universal language and still have different cultures. The commonality of language within a culture is not a basis for patriotism. For example, as opposed to the Haitian patriot and the Quebecer who feel linguistically united to their respective countrymen, the American patriot does not indiscriminately use the English language as the ultimate factor that unites him to his compatriots, although there is a marked difference between the English spoken by north-Americans and the one spoken by English-speaking people of the rest of the world. English, being an important communication tool, is arguably valued by all American citizens. However, American patriotism is rather based on the concept of *American exceptionalism,* an ideology according to which all Americans are united by a unique history, a unique mission, and unique values. The United States came to be not because of the quest for linguistic unification but rather because of the significance of frontier, which promoted national identity or patriotism or the formation of a composite nationality for the American people, the growth of democracy, and the industrial independence from England. The proof of the lesser role played by language in Americanism is the fact that the United States still does not have an official language since its access to Statehood in 1776.

To downplay the importance of language in culture, the campaign could make the following argument as well: throughout history, people have always been more likely to go to war not because of language differences but because of religious differences. Religion, in culture, is more sensitive than language, although the latter is used to convey religious messages. But, in the linguistic awareness campaign, to prioritize the importance of language over that of religion, it is important to come up with meaningful arguments to make the public fathom the differences between the two. The following is a parenthesis (up to page 158), of sorts, aimed at clarifying that point.

In their article *Doesn’t religion cause most of the conflict in the world?* – which is actually an abstract from the book *For God’s Sake* – The Guardian reported opinions from four Australian writers – Rachel Woodlock, Antony Loewenstein, Jane Caro, and Simon Smart – with different beliefs. Their views are as follows:

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*37* Although there have been periods when American Indian children were forbidden to speak a language other than English at school.
1. According to Rachel Woodlock (Islam), religion is powerfully motivating, and belligerent humans fight over it. Heck, religion has caused conflict even in my diverse and tolerant family. Taking our daughter to visit her Irish-Catholic relatives, I asked my husband to make sure they didn't give her any pork. Like Jews, Muslims steer clear of anything with an oink. My gentle, peaceable mate, wanting to avoid one of those conversations, said: "Mam, Yazzy does not like pork so don't give her any." A few days later, my beaming mother-in-law proudly announced: "She does like pork. I gave her some sausages and she ate them right up!" It took a few days for my blood pressure to return to normal.

Then again, humans also fight over small bits of compressed carbon, tracts of dirt, addictive mind-altering substances and soccer matches. It's not just religious ideology that causes problems – state-imposed atheism was a defining feature of brutal 20th century regimes led by Stalin, Tito, Mao Zedong, and Pol Pot among others, which resulted in the suffering and murder of millions. Tens of thousands of Russian Christians alone were executed for their beliefs by atheists' intent on purging religion from the Soviet Union.

Yet it's true, religion has been a major feature in some historical conflicts and the most recent wave of modern terrorism. Religion has taken on extra significance today because globalization is challenging and changing everything. Religious identity not only survives but can take on heightened significance when national and political alliances break apart, as happened in the former Yugoslavia in the early 1990s, when Serbs, Croats and Bosniacs were divided along Orthodox, Catholic and Muslim fault lines.

The Qur'an recognizes the human propensity for conflict and gives permission for defensive warfare. Muslim scholars developed a just-war theory although admittedly in the ensuing centuries jihad was also used to further the territorial ambitions of ruthless leaders, just as today it's distorted to justify terrorist bombings. Like both law and politics, religion can be used to defend the oppressed and to oppress the defenseless.
The problem of corrupt religion has attracted the criticism of many prophets and saints. The Qur'an censures religious hypocrites: “Among the people there is he whose discourse on the life of the world pleases you, and he calls on God as witness to what is in his heart, yet he is an unyielding and antagonistic adversary. When he turns and leaves, he walks about corrupting the earth, destroying crops and livestock – God loves not corruption (Q2:204–205).”

The verse could well apply to Saddam Hussein, who made a show of praying on television, but gassed and bombed Kurds and was a tyrannical dictator. Religion, unfortunately, provides a useful cover and powerful motivator for the evil-hearted. That religion can be so markedly different in the hands of the power-hungry, as opposed to the altruistic and virtuous, really says more about human psychology than it does about religion. That is why so many human conflicts unfortunately involve religion.

2. Antony Loewenstein (Judaism) says that Alain de Botton, philosopher and author of *Religion for Atheists*, is worried about fundamentalism. "To say something along the lines of 'I'm an atheist: I think religions are not all bad' has become a dramatically peculiar thing to say," he told British journalist Bryan Appleyard in 2012. "If you do say it on the internet you will get savage messages calling you a fascist, an idiot or a fool. This is a very odd moment in our culture."

Neo-atheism, the belief that science is the only path to truth and all religions are equally deluded and destructive, has taken hold in much of the debate over atheism. The movement, whose keys figures include Richard Dawkins, the late Christopher Hitchens, Sam Harris and Daniel Dennett, is an ideology that arrogantly celebrates an understanding of everything through supposed reason and proof. It allows little doubt or questioning about the unknown. It also happens that some of these key figures, including Ayaan Hirsi Ali, are backers of state violence against Muslim countries since 11 September 2001. It's clearly an exaggeration to suggest atheists are rampaging through the streets demanding the end of religious belief but the last decade has seen an ever-increasing number of atheists feeling the need to ridicule or damn people who do believe in a god.

Dawkins, at a dinner with de Botton and others in London in 2012, recounted a conversation he'd had with Hitchens. "Do you ever worry," Dawkins asked, "that if we win and, so to speak, destroy Christianity, that vacuum would be filled with Islam?"

It's a curious question that reflects both the vicious hatred of Muslims by many so-called new atheists but also a creepy utopian nightmare that is apparently idealized by them.
5. Recommendations

Joint International Linguistic Awareness Campaign (reasons for the campaign)

Destroy Christianity? Because the Catholic Church has committed innumerable crimes, opposes abortion and birth control, refuses to accept female priests and hides sex offenders in its midst? To be sure, the institution is dysfunctional, but wishing for its disintegration reflects a savagery that will only inflame, not reduce tensions.

None of this is to excuse the undeniable barbarity unleashed by religionists over the centuries. The misogyny, beheadings, terrorism, killings, beatings and cruelty are real. They continue. Today we see a growing battle in the Middle East between Shi'ite and Sunni; a Jewish state unleashing militancy against Christian and Muslim Palestinians; and an anti-gay crusade led by some Jewish, Christian and Muslim leaders that threatens the sanctity of life itself.

I've been guilty of claiming religion is the source of the world's evils, but it's a careless comment. It's far too easy to blame the Muslim faith for honor killings. I'm under no illusion about the fact that religion is routinely used to justify the more heinous crimes. But the 20th century is filled with examples, namely Stalin's Soviet Union and Mao's China, that didn't need God as an excuse to commit genocide against a state's own people.

3. Jane Caro (Atheism) tells us that as 14-year-old Malala Yousafzai sat on a bus in the grounds of her school in Pakistan's Swat Valley, a gunman shot her in the head. After proudly claiming responsibility, the Taliban told the world that the teenage education activist's work represented "a new chapter of obscenity, and we have to finish this chapter". The "obscenity" was the education of girls.

The Taliban felt no shame. They know that what they have done is right because their god tells them so. Gods have been used to justify almost any cruelty, from burning heretics and stoning adulterers to crucifying Jesus himself.

On the other side of the world, Anders Behring Breivik slaughtered 77 Norwegians. Breivik seems to have seen his murderous spree as a way of getting rid of Muslims, yet his 1,500-page manifesto revealed, at best, a weak attachment to religious belief. To Breivik, Christianity seems important mainly because he sees it as white. Breivik, like the devoutly religious Taliban, also appears to feel no shame.

The men who flew planes into buildings on 9/11, the Pakistanis who went on a murderous rampage in Mumbai and the Bali bombers, all killed as many people as they could in the name of their religion. Breivik did it in the name of his race. Timothy McVeigh, who killed 168 people and wounded 800, hated the government. All saw their mass murder as a political act of protest and all felt justified.
Atheists like Mao or Pol Pot have murdered millions in the name of political totalitarianism. Hitler used a quasi-mystical racist philosophy to exploit the ancient hatred of the Jews by Christians. I heard somewhere (I've never been able to discover where) that terrorism occurs when you combine a sense of military and economic inferiority with a sense of moral superiority. Religion is very good at conferring a sense of moral superiority on its followers.

Indeed, while the religious have murdered throughout history in the name of their god, I've been unable to find any evidence of atheists killing anyone in the name of atheism. Atheists are no more or less capable of evil than anyone else, but it seems that murder, particularly mass murder and war, is a sin of commission. In other words, human beings are generally only prepared to fight and kill in the name of something. It can be a god, but it can also be a political philosophy – like Nazism or communism. Many fight for patriotism: for country, tribe or race. Some kill because they are psychologically disturbed, but none – so far – in the name of atheism.

So, while I don't agree that only religion causes conflict, I'd argue that all mass murder and war are fought in the name of a bigger-than-self philosophy or idea. Atheism, simply lack of belief in a god, has not yet proved compelling enough to motivate murder. So far no one has gone into a crowded public space and blown themselves up while shouting, "No god is great!"

4. As for Simon Smart (Christianity), he thinks that Religion has been implicated in all sorts of conflict and violence throughout human history. There is blood on the hands of the faithful, and no avoiding the fact that in the service of the wrong people, religion can be a force of great harm. This includes Christianity. If we consider the sins of the Christian past critics have plenty to work with – witch-hunts, the Crusades, Christian support of slavery.

But the picture is much more complex than is often implied. Take the Inquisition. Dinner party guests are likely to nod in agreement when someone mentions the "millions killed" at the hands of the church but historians now suggest around 5,000 – 6,000 over a 350-year period. That is less than 18 a year. One a year is terrible, but the reality appears a long way from what we are often served up.

Likewise, the idea that most of the wars of history have been caused by religion is demonstrably false. The vast majority of wars have been conducted in the pursuit of profits or power, or waged for territory or tribal supremacy, even if religion has been caught up in those pursuits. But there is a very real sense in which religion can moderate those forces. David Hart notes that, "Religious conviction often provides the sole compelling reason for
refusing to kill … or for seeking peace … the truth is that religion and irreligion are cultural variables, but killing is a human constant".

Of course, millions were killed at the hands of Mao, Stalin and Pol Pot. To say their murderous totalitarianism had nothing to do with their atheism is to completely misunderstand them and the ideologies on which their actions rested. Yale theologian Miroslav Volf argues that as far as Christianity goes, it will only be violent if it is stripped of its content— thinned out - and infused with a different set of values. The story of Jesus gives absolutely no warrant for violence. Any believer behaving that way is disobeying the one they claim to be following.

The answer, Volf argues, to violence perpetrated in the name of the Cross, is not less Christianity but more – Christianity that is not depleted of its meaning but full of its original moral content, which is at its heart non-violent and a force for good.

When Martin Luther King Jr confronted racism in the white church in the South he called on those churches not to become more secular, but more Christian. King knew that the answer to racism and violence was not less Christianity but a deeper and truer Christianity. King gained his inspiration from the one who said that those who follow him must turn the other cheek, love their enemies and pray for those who persecuted them. His leadership of the civil rights struggle remains a fine example of love triumphing over hate; of costly and courageous resistance of evil and of religiously inspired social action that made the kind of difference that everyone can appreciate.

This digression was necessary in the sense that it shows that most people will be willing to side with you if you don’t attack their faith. Showing that the linguistic movement isn’t a religious movement and is not out there to belittle any religion is meaningful. The above testimonies would be relevant, as the campaign would need to use many testimonies in order to motivate and ultimately rally the greatest number of people behind it.

Another example that could be used by the campaign to downplay the importance of language in culture is the downside of bilingualism or multilingualism in the face of such abstractions as time. New studies – besides the linguistic relativity theory, which stipulates that people see the world differently according to the language they speak – have shown that people conceive time differently according to their native language. Emanuel Bylund and Panos Thanasopoulos, in their article The Whorfian time warp: Representing duration through the language hourglass, have corroborated that fact. Here is an abstract of their article: “How do humans construct their mental representations of the passage of time? The universalist account claims that abstract concepts like time are universal across humans. In contrast, the linguistic relativity hypothesis holds that speakers of different languages represent duration differently. The precise impact of language on
duration representation is, however, unknown. Here, we show that language can have a powerful role in transforming humans’ psychophysical experience of time. Contrary to the universalist account, we found language-specific interference in a duration reproduction task, where stimulus duration conflicted with its physical growth. When reproducing duration, Swedish speakers were misled by stimulus length, and Spanish speakers were misled by stimulus size/quantity. These patterns conform to preferred expressions of duration magnitude in these languages (Swedish: long/short time; Spanish: much/small time). Critically, Spanish-Swedish bilinguals performing the task in both languages showed different interference depending on language context. Such shifting behavior within the same individual reveals hitherto undocumented levels of flexibility in time representation. Finally, contrary to the linguistic relativity hypothesis, language interference was confined to difficult discriminations (i.e., when stimuli varied only subtly in duration and growth), and was eliminated when linguistic cues were removed from the task. These results reveal the malleable nature of human time representation as part of a highly adaptive information processing system.

The question to ask is: is the fact that we represent time differently because we speak different languages an advantage or a disadvantage? Wouldn’t it be best if we were on the page across the board? One of the pros of a global native language lies within its potential to remove that time distortion by our brains? Why can’t everyone see the world the same way, as opposed to the stipulation of the linguistic relativity hypothesis? In their review of Bylund’s article, Science Daily stated that “the results were clear-cut: When watching containers filling up and prompted by the Spanish prompt word, bilinguals based their time estimates of how full the containers were, perceiving time as volume. They were unaffected by the lines growing on screens. Conversely, when given the Swedish prompt word, bilinguals suddenly switched their behaviour, with their time estimates becoming influenced by the distance the lines had travelled, but not by how much the containers had filled. ‘By learning a new language, you suddenly become attuned to perceptual dimensions that you weren't aware of before,’ says Professor Athanasopoulos. ‘The fact that bilinguals go between these different ways of estimating time effortlessly and unconsciously fits in with a growing body of evidence demonstrating the ease with which language can creep into our most basic senses, including our emotions, our visual perception, and now it turns out, our sense of time.’”

Furthermore, besides time, the brains of bilingual people react in a specific way in the face of mental calculations by making extra efforts when solving arithmetic tasks in a second language of instruction. Since the mathematical processes initiated by the brain vary depending on the language used, one can infer that these processes are even more complicated in the brains of multilingual people. A universal native language could solve that problematic. Van Rinsveld, Amandine et al., corroborate this fact in their study “Mental arithmetic in the bilingual brain: Language matters.” “People can intuitively recognize small numbers up to four; however, when calculating they depend on the assistance of language. In this respect, the fascinating research question ensues: how
do multilingual people solve arithmetical tasks presented to them in different languages of which they have a very good command? The question will gain in importance in the future, as an increasingly globalized job market and accelerated migration will mean that ever more people seek work and study outside of the linguistic area of their home countries [...] This question was investigated by a research team led by Dr Amandine Van Rinsveld and Professor Dr Christine Schiltz from the Cognitive Science and Assessment Institute (COSA) at the University of Luxembourg. For the purpose of the study, the researchers recruited subjects with Luxembourgish as their mother tongue, who successfully completed their schooling in the Grand Duchy of Luxembourg and continued their academic studies in francophone universities in Belgium. Thus, the study subjects mastered both the German and French languages perfectly. As Luxembourger students, they took math classes in primary schools in German and then in secondary schools in French [...] In two separate test situations, the study participants had to solve very simple and a bit more complex addition tasks, both in German and French. In the tests, it became evident that the subjects were able to solve simple addition tasks equally well in both languages. However, for complex addition in French, they required more time than with an identical task in German. Moreover, they made more errors when attempting to solve tasks in French [...] During the tests, functional magnetic resonance imaging (fMRI) was used to measure the brain activity of the subjects. This demonstrated that, depending on the language used, different brain regions were activated. With addition tasks in German, a small speech region in the left temporal lobe was activated. When solving complex calculatory tasks in French, additional parts of the subjects' brains responsible for processing visual information, were involved. However, during the complex calculations in French, the subjects additionally fell back on figurative thinking. The experiments do not provide any evidence that the subjects translated the tasks they were confronted with from French into German, in order to solve the problem. While the test subjects were able to solve German tasks on the basis of the classic, familiar numerical-verbal brain areas, this system proved not to be sufficiently viable in the second language of instruction, in this case French. To solve the arithmetic tasks in French, the test subjects had to systematically fall back on other thought processes, not observed so far in monolingual persons [...] The study documents for the first time, with the help of brain activity measurements and imaging techniques, the demonstrable cognitive "extra effort" required for solving arithmetic tasks in the second language of instruction. The research results clearly show that calculatory processes are directly affected by language.” Science Daily (2017).

The highlights of this study are as follow: “1) Bilingual adults were scanned with fMRI while computing mental arithmetic problems; 2) Arithmetic problem solving induced distinct activation pattern in each of bilingual's languages; and 3) Language plays a critical role in arithmetic [...] How do bilinguals solve arithmetic problems in each of their languages? We investigated this question by exploring the neural substrates of mental arithmetic in bilinguals. Critically, our population was composed of a homogeneous group of adults who were fluent in both of their
instruction languages (i.e., German as first instruction language and French as second instruction language). Twenty bilinguals were scanned with fMRI (3 T) while performing mental arithmetic. Both simple and complex problems were presented to disentangle memory retrieval occurring in very simple problems from arithmetic computation occurring in more complex problems. In simple additions, the left temporal regions were more activated in German than in French, whereas no brain regions showed additional activity in the reverse contrast. Complex additions revealed the reverse pattern, since the activations of regions for French surpassed the same computations in German and the extra regions were located predominantly in occipital regions. Our results thus highlight that highly proficient bilinguals rely on differential activation patterns to solve simple and complex additions in each of their languages, suggesting different solving procedures. The present study confirms the critical role of language in arithmetic problem solving and provides novel insights into how highly proficient bilinguals solve arithmetic problems.” Van Rinsveld, Amandine et al. (2017).

Finally, as it’s the case for every project, the international awareness campaign would require a plan that would be implemented and executed across the globe at a micro level, but overseen at a macro level by an international entity or the United Nations, more precisely by UNESCO, who would evaluate the final results. During the process of implementation, it’s important that the processes be defined, measured, analyzed, improved, and controlled. I do suggest a linguistic awareness plan. But it is important, first, to be familiar with the countries and regions of the world where multilingualism prevails. As you will see in the next section entitled “List of multilingual countries and regions”, virtually every part of our world experiences multilingualism, which shows how important it will be for the campaign to convince world nations to adopt the potential universal language, which would be a native language for all human beings. Native language? This book is about the emergence of a new native language, but I have not defined, thus far, what do I mean by native language. I purposely waited because I wanted to stress how important it would be for the linguistic awareness campaign to educate the world’s population about their current native languages and the emergent global native language. It is crucial that everyone knows that they would still keep whatever language is their native language while the new language could also have native language status. To clear up the confusion, let’s see what is it exactly does a native language entail?

- **Native language: definition(s) and characteristics**

Any language to which a person has been exposed from birth to the age of 10 (called the critical period) can be called a native language. Other synonymous terms include mother tongue or father tongue, arterial language or L1. It’s important to note that one’s native language may be the language spoken by his ethnic group rather than the language spoken by his parents. Because any
language a child is exposed to during his critical period is his native language, needless to say that someone can have more than one native language, in which case he is referred to as bilingual or multilingual. However, once someone’s native language (or languages) is established, any other language which he comes across is called second language or L2. As Miller, Casey (2001) put it: "Our native language is like a second skin, so much a part of us we resist the idea that it is constantly changing, constantly being renewed. Though we know intellectually that the English we speak today, and the English of Shakespeare's time are very different, we tend to think of them as the same--static rather than dynamic."

The place of birth is crucial in the determination of someone’s first language and to be called a native speaker. A first language needs to be associated with a country before saying that the acquisition process has been done naturally. There must be a phenomenon of immersion into the society. The child must interact with people of that country. While growing up, he may also pick other languages as his native languages, but that has to be done in one place at the same time. For example, a child may pick up the language spoken by each parent if they have different native languages and they each insists that the child ends up speaking their language.

“In the context of population censuses conducted on the Canadian population, Statistics Canada defines mother tongue as "the first language learned at home in childhood and still understood by the individual at the time of the census." It is quite possible that the first language learned is no longer a speaker's dominant language. That includes young immigrant children whose families have moved to a new linguistic environment as well as people who learned their mother tongue as a young child at home (rather than the language of the majority of the community), who may have lost, in part or in totality, the language they first acquired … According to Ivan Illich, the term "mother tongue" was first used by Catholic monks to designate a particular language they used, instead of Latin, when they are "speaking from the pulpit". That is, the "holy mother the Church" introduced this term and colonies inherited it from Christianity as a part of colonialism … In some countries, such as Kenya, India, and various East Asian countries, "mother language" or "native language" is used to indicate the language of one's ethnic group in both common and journalistic parlance ("I have no apologies for not learning my mother tongue"), rather than one's first language. Also, in Singapore, "mother tongue" refers to the language of one's ethnic group regardless of actual proficiency, and the "first language" refers to English, which was established on the island under the British Empire, which is the lingua franca for most post-independence Singaporeans because of its use as the language of instruction in government schools and as a working language … J. R. R. Tolkien, in his 1955 lecture "English and Welsh," distinguishes the "native tongue" from the "cradle tongue." The latter is the language one happens to learn during early childhood, and one's true "native tongue" may be different, possibly determined by an inherited linguistic taste and may later in life be discovered by a strong emotional affinity to a specific dialect (Tolkien personally confessed to such an affinity to the Middle English of the West Midlands in particular).” Wikipedia (2017)
In his article “The Native Speaker: An Achievable Model?” Joseph Lee states that there are six general principles that relate to the definition of "native speaker":

1. The individual acquired the language in early childhood.
2. The individual has intuitive knowledge of the language.
3. The individual is able to produce fluent, spontaneous discourse.
4. The individual is competent in communication.
5. The individual identifies with or is identified by a language community.
6. The individual has a dialect accent (including the official dialect).

An interesting question to ask is: can someone lose or forget his native language? The answer is ‘somehow’. Say you stop speaking your native language at the age of 5. You might lose it or be not as fluent as someone else who spoke it until adolescence. Remember, native language follows a social and environmental process. The person who last spoke a language in early childhood will lack the necessary experience and vocabulary to carry out a substantial conversation. Even though you speak your native language all your life, it’s still can be impacted by another language if, for example, you’ve lived in a different dominant environment where another language is spoken. For example, this person (anonymous) tells us: “This has happened to 3 people I know:

My mom grew up in India, so she learned Hindi. Now, after almost 20 years of living in the US, she has forgotten some vocabulary. I’m trying to learn Hindi, and whenever I ask her a question, there’s a 50% chance she doesn’t know or remember the answer. She can barely write, too.

The other person is my 6th-grade teacher. It’s been a long time since I’ve seen her, but last time I did, she told me that she grew up in Suriname, the only Dutch-speaking country in South America. After about 30 years of living in the US, she knows about as much Dutch as someone on Duolingo who has completed the Dutch tree. She can’t speak or write anymore, but she can understand sentences (not clearly though).

The last person is me. My parents have always spoken Tamil with me, and apparently, when I was like 4-5, I was able to speak the language. I tried to read and write at age 6, but that fell through, and know, I can understand my parents, but I always reply in English since I can’t speak the language anymore.”

The bottom line is practice makes perfect and as the saying goes, when it comes to languages: “You don’t use it, you lose it”. The following testimony by an anonymous person explains it: “You can be almost equally fluent in two or even three different languages if you use them daily.

I know a girl who speaks Spanish, English, German, French and Italian since she was a child, and (the most important thing) she has managed to keep speaking those five languages almost daily ever since.
She is almost equally fluent in all them. I once asked her: "when you are thinking and/or dreaming, what language is it in?"

She said: "It depends. Usually the one I have been using the most in the last few hours, but sometimes it (the dream) just changes from one to another kind of randomly".

As for me (the author of this book), my fellow Haitians don’t understand when I tell them that, when it comes to a substantial, intellectual or meaningful discussion, I prefer to have either in French or in English. They automatically use such arguments as ‘unpatriotism, French or American wannabe’. After almost three decades spent outside of Haiti, my Haitian Creole is nowhere near the level it once was. Words that used to be part of my active vocabulary have shifted into my passive vocabulary. That is, I still can understand them when used by someone else, but they will be most likely unintentionally replaced by a French or an English term during a conversation in Haitian Creole. As I mentioned above, I was not educated in Haitian Creole, as opposed to the newer and younger generations of Haitians. When I was growing up in Haiti, the use of Haitian Creole, in formal settings, was taboo and was done only in informal settings. So, I guess your question to me might be: “What is your native language?” and my answer would be: “Haitian Creole and French” Like many educated Haitians, everything I was taught in school in Haiti (from kindergarten to college or from 3 to 24 years old) was in French, but Haitian Creole was spoken at home, among friends, and in informal settings, while French was spoken in formal settings and in school, etc. Today, although Haitian Creole is one of the two official languages of Haiti and the native language of 100% of Haitians living in Haiti, it still lacks the scientific, philosophical, computational (etc.) vocabularies\textsuperscript{38} that one would need to efficiently carry out an intellectual discussion. Haitian Creole has never been a first-choice language for many Haitians in a very long time. I guess one of the most urgent tasks of the Haitian Creole Academy must be to make it so that Haitians can “think” and can produce scientific works in their native language. For example, as a linguist, I wish I could have published this book in Haitian Creole as well, but I know that most of the terms I use do not yet have their officially agreed upon and widely accepted equivalents in Haitian Creole. To conclude this discussion on native languages, I would like to say that yes, native languages are fragile, changing, and are subject to loss and inefficiency by their native speakers. These are the very characteristics – adaptability, fluidity or changeability – which show that the new language should not be difficult to be acquired as an international native language even though every single part of our world experiences linguistic diversity or multilingualism.

\textsuperscript{38} When it comes to computational vocabulary, it is fair to say that most spoken languages are experiencing the same issue. But, in the case of Haiti, it is even exacerbated, because of low human development index.
Countries and regions where monolingualism could solve ambiguities, diglossia, cultural, or political conflicts linked to multilingualism

The following countries and regions arguably reflect who we are as a species: diverse but with inherent characteristics, specifically inherent linguistic characteristics such as speech and language. This diversity does not come unequivocally. I already explained how multilingualism can constitute a barrier to our linguistic unification. The table below is a partial list of countries and regions where the problematic is most enhanced. It could be used to conceive a customized micro plan for each multilingual region or country, according to their current linguistic dynamics.

<table>
<thead>
<tr>
<th>Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)</th>
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<tbody>
<tr>
<td>1. Africa</td>
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<tr>
<td><strong>1a. Central Africa</strong></td>
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<tr>
<td>- <em>Cameroon</em>: English &amp; French (official) + Cameroonian Pidgin. Many ethnic and tribal languages including Basaa, Duala, Manenguba language, Bikya, Bung, Fula, Kanuri, Ngumba, Yeni, Bamum, Bafia, Bakweri language and many others. Some also have fluency in the German, Portuguese and Spanish languages.</td>
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<tr>
<td>- <em>Central African Republic</em>: French &amp; Sango (official) and 50 other African languages.</td>
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<tr>
<td>- <em>Chad</em>: Arabic &amp; French (official) + more than 100 African languages.</td>
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<tr>
<td>- <em>Democratic Republic of the Congo</em>: French (official) + Lingala, Kongo, Swahili &amp; Tshiluba (national languages) + 238 other languages.</td>
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<td>- <em>Equatorial Guinea</em>: Spanish + French. Fang, Bube, Igbo, Pidgin English, Annobonese</td>
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<tr>
<td>- <em>Republic of the Congo</em>: French (official) + Lingala &amp; Kituba national languages + other dialects, including Kikongo and Kituba (Kikongo creole).</td>
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<td><strong>1b. East Africa</strong></td>
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<tr>
<td>- <em>Burundi</em>: Kirundi (national and official) + English and French (official).</td>
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<tr>
<td>- <em>Kenya</em>: English (official) &amp; Swahili (national and official) + other indigenous languages.</td>
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<td>- <em>Rwanda</em>: English, French, Swahili &amp; Kinyarwanda (co-official; Kinyarwanda - also a national one).</td>
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<tr>
<td>- <em>Seychelles</em>: English, French &amp; Seychellois Creole (co-official).</td>
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<tr>
<td>- <em>Tanzania</em>: Swahili (national) + English.</td>
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<tr>
<td>- <em>Uganda</em>: English (official), Swahili (second official) + Arabic, Luganda + other Bantu languages &amp; other Nilo-Saharan languages.</td>
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<td><strong>1c. Horn of Africa</strong></td>
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<tr>
<td>- <em>Djibouti</em>: Arabic &amp; French (official) + Somali &amp; Afar.</td>
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<tr>
<td>- <em>Eritrea</em>: no official language, with two dominant language families: Semitic (Arabic, Tigrinya, Tigre and Dahlük) and Cushitic (Afar, Beja, Blin, Saho)</td>
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<tr>
<td>- <em>Ethiopia</em>: Amharic (official); Oromo, Tigrinya, Somali, Afar, and other Cushitic and Semitic languages.</td>
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<tr>
<td>- <em>Somalia</em>: Somali (official) &amp; Arabic (&quot;second language&quot;).</td>
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<td><strong>1d. North Africa</strong></td>
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<tr>
<td>- <em>Algeria</em>: Arabic + Tamazight (both official and national language in the constitution) + French (media, education and business).</td>
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<td>- <em>Egypt</em>: Arabic (official) + Egyptian Arabic, English &amp; French.</td>
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<tr>
<td>- <em>Libya</em>: Arabic (official) + Tamazight, Tamahaq + Italian &amp; English.</td>
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<tr>
<td>- <em>Mauritania</em>: Arabic (official and national) + Poular, Soninke, and Wolof (national)</td>
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<tr>
<td>- <em>Morocco</em>: Arabic + Berber (co-official). Moroccan Arabic, Hassaniya (present in the media); French and English (education and business).</td>
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<tr>
<td>- <em>Western Sahara</em> (under Moroccan control): Hassaniya, Berber, Moroccan Arabic, Spanish and French.</td>
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### Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- **Sahrawi Arab Democratic Republic** (in exile): Arabic + Spanish and French.
- **Sudan**: Arabic & English (official working languages) + indigenous African languages.
- **South Sudan**: Arabic & English
- **Tunisia**: Modern Standard Arabic (official) + Tunisian Arabic, French, Berber language, English

#### 1. Southern Africa

- **Angola**: Portuguese (official language) + Cokwe, Kikongo, Oshiwambo, and 34 additional indigenous African languages
- **Botswana**: English, Tswana, Kalanga, Khoi, Herero, Afrikaans, Nama, San, Ndebele, Sign language, and 21 others.
- **Comores**: Arabic, Comorian, French (official), Indian and Chinese languages.
- **Lesotho**: Arabic + Sotho.
- **Madagascar**: French + Malagasy.
- **Malawi**: Chewa (de facto language of national identity) + English (statutory national working language).
- **Mauritius**: English (official) + French (administrative), Mauritian Creole (lingua franca), Bhojpuri ("Hindi"), Hakka, Tamil, Urdu, Marathi and Arabic.
- **Mozambique**: Portuguese (official language) + 43 additional indigenous African languages
- **Namibia**: English (official) + German, Afrikaans, Ovambo (recognised regional languages)
- **South Africa**: Afrikaans, English, Ndebele, Northern Sotho, Sotho, Tswana, Swati, Tsonga, Venda, Xhosa, Zulu (co-official), sign language, Khoi, Nama and San (the languages, which the government is obliged to promote and to create conditions for their development).
- **Swaziland**: English + Swati.
- **Zimbabwe**: Chewa, Chichewa, English, Kalanga, Koisan, Nambya, Ndua, Ndebele, Shangani, Shona, sign language, Sotho, Tonga, Tswana, Venda and Xhosa, Zulu (co-official), sign language, Khoi, Nama and San (the languages, which the government is obliged to promote and to create conditions for their development).

#### 2. West Africa

- **Benin**: French (official) + many indigenous languages including Fon, Yoruba & Songhay (specifically Dendi).
- **Burkina Faso**: French (official) + Moore and Jula (regional languages) + indigenous Sudanic languages.
- **Cape Verde**: Portuguese + Cape Verdean Creole.
- **Côte d'Ivoire**: French (official) + Baule, Jula, and 60 other indigenous languages.
- **Gambia**: English (official) + Mandinka, Wolof, Fula & others.
- **Ghana**: English (official) + Akan, Dagaara/Wale, Dagbane, Dangme, Ewe, Ga, Gonja, Kasem & Nzema + 70 others.
- **Guinea**: French (official) + Fula & Susu.
- **Guinea-Bissau**: Portuguese (official) + Kriol + indigenous languages.
- **Liberia**: English (official) + 20 African languages.
- **Mali**: French (official) + Bambara (most widely spoken) + Fula + Songhay (specifically Dendi). 11 languages are used as mediums of instruction in primary schools
- **Niger**: French (official) + Hausa (spoken by half the population) + Songhay (specifically Zarma)
- **Nigeria**: English (official) + Yoruba, Hausa, Igbo as three other languages of the parliament (each of which has over 20 million speakers) + 529 other African languages (some of which have over a million speakers) + Pidgin.
- **Senegal**: French (official) + Wolof (most widely spoken) + Fula (specifically Pulaar), Diola, Malinké, Sérère, Soninké (national languages) + other African languages
- **Sierra Leone**: English (official) + Krio (most widely spoken) + Mende + Temne + other African languages
- **Togo**: French (official) + Ewe, Mina & Kabiye.

#### 3. Americas

- **Argentina** has several ethnic communities of European (especially the Welsh language in Patagonia), Asian and indigenous origins (the Andean and northeast regions), who speak their own languages, but Spanish is the sole official language of the country.
### Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- **Aruba**: Papiamento and Dutch are the official languages, with Spanish and English also widely spoken. All four languages are taught in schools.
- **Belize**: English, Spanish and Mayan languages have some official usage, although the legacy of British rule emphasized English to be most commonly used for official purposes though the majority are Hispanophone.
- **Bolivia** is officially multilingual, supporting Spanish and 36 native languages.
- **Brazil**: Portuguese (official) and upwards to 100 languages spoken mainly in the urban areas (European and Asian) and indigenous languages in the Amazon. The use of indigenous languages in primary education is enshrined in the constitution.
  - Espírito Santo — German and East Pomeranian are recognized by constitution as part of the state's cultural heritage.
- **Canada** is officially bilingual under the Official Languages Act and the Constitution of Canada that require the federal government to deliver services in both official languages. As well, minority language rights are guaranteed where numbers warrant. 56.9% of the population speak English as their first language while 22.9% are native speakers of French. The remaining population belong to some of Canada’s many immigrant populations or to the indigenous population.
  - The Canadian province of New Brunswick, with a large Acadian population (33% French-speaking) is officially bilingual.
  - The Canadian province of Quebec, (5% English-speaking). Although there is a relatively sizable English-speaking population in Quebec, French is the only official language of the provincial government. At the same time, certain functions in education are foreseen for English, Amerindian languages and Inuktitut, certain functions in legislative activities and judiciary - for English. Many government services are available in English and French.
  - There are also significant French language minorities in the provinces of Manitoba, Nova Scotia, Ontario and Prince Edward Island. Though these provinces are not officially bilingual they do provide a number of services in French, Ontario has a particular French Language Services Act and Manitoba — a French Language Services Policy, as well as a special law on recognition of seven indigenous languages.
  - Nunavut is a Canadian territory with a population that is 85% Inuit. According to Official Languages Act, its official languages are Inuit, English and French.
  - Northwest Territories have Chipewyan, Cree, English, French, Gwich’in, Inuinnaqtun, Inuktitut, Inuvialuktun, North Slavey, South Slavey and Tâîchô as the official languages.
  - Yukon allows the use of Yukon languages in its legislative assembly, along French and English.
  - In many of Canada's First Nations' communities in the more isolated regions, aboriginal languages are retained. English and French are accepted in the community at the community elders' discretion.
  - In the 2006 Canadian census, information and questions are available in sixty-two languages, including eighteen First Nations languages.
- **Caribbean Netherlands** — Dutch (overall), English (Sint Eustatius and Saba) and Papiamentu (Bonaire)
- **Chile** uses de facto Spanish as official language, but there is not an act that declares officiality. The Indigenous Act ratified in 1992 permits the official usage of four indigenous languages: Aimara, Mapudungun, Quechua and Rapa Nui (Easter Island in Polynesia) inside the indigenous communities and areas with high native population density. In the southern portion, there is a sizable but bilingual German-speaking population.
- **Colombia**, the official language is Spanish. Languages of ethnic groups are official in their territories. English is co-official in San Andres and Providencia.
- **Curacao** — Papiamento, Dutch and English are official languages.
- **Ecuador** defines Spanish as its official language, but Spanish, Quechua and Shuar — as official languages of intercultural relations in the Article 2 of the 2008 Constitution.
- **Guatemala**, the official language is Spanish, however, there are 23 distinct Mayan languages. Maya, Garifuna and Xincan languages are recognized to be essential elements of the national identity.
- **Guyana**, English (official), Hindi, Chinese, indigenous languages, and a small Portuguese-speaking community. The Amerindian Act orders the National Toshaos Council to promote the recognition and use of Amerindian languages.
Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- **Haiti**: Haitian Creole and French
- **Honduras**: Spanish is the official language, despite Afro-Caribbean English, Garifuna and indigenous languages can be found in the rural outskirts of the country.
- **Mexico**: The government recognizes 62 indigenous languages, including Nahuatl spoken by more than 1.5 million people and Aquacatec spoken by 27 people, along with Spanish. Indigenous languages are recognized as national languages in areas where they are spoken. There is no official language at the federal level, although Spanish is the de facto state language.
  - In Yucatán, Yucatec Maya language is recognized in state constitution
  - In Oaxaca state constitution, 15 indigenous communities are listed. Certain use of their languages in education and court proceedings is provided for.
  - In Campeche state constitution, use of indigenous languages in courts and teaching them in schools are provided for.
  - In Quintana Roo state constitution, use of indigenous languages in courts and education is provided for; also, the laws are to be published in Maya language
  - In Chihuahua state constitution, use of indigenous languages in courts, education, health care and government-disseminated information is provided for
  - In Chiapas state constitution, use of indigenous languages in courts and education is provided for
- **Nicaragua**, even while Spanish is the official language spoken broadly (almost 95%, according to some sources), there are other de facto languages such as Creole, Miskitu, Rama and Mayangna (Sumu) in their own linguistic communities. According to the Constitution, the languages of the Atlantic Coasts should be used officially in cases established by law.
- **Paraguay**, 48% of its population is bilingual in Guaraní and Spanish (both official languages of the Republic), of whom 37% speak only Guaraní and 8% only Spanish but the latter increases with the use of Jopará. There is a large Mennonite German colony in the Gran Chaco region as well.
- **Peru**'s official languages are Spanish and, in the zones where they are predominant, Quechua, Aymara, and other aboriginal languages. In addition to that, in Peru there is a large community of immigrants, of which few keep their languages. Within those, there are the Japanese and the Chinese (Cantonese dialect), for example and in smaller numbers, the Germans (central Andes), Italian, the Arabic speakers, and the Urdu speakers retain their native languages in Peru. The last two are products of the recent wave of immigrants from Palestine and Pakistan. Lately also have much influence is the English by the number of tourists and American and British residents.
- **Puerto Rico**'s official languages and languages of legislature are Spanish and English, yet 85 percent of its inhabitants reported that they did not speak English "very well."
- **Suriname**, Dutch, Sranan, and English are spoken by almost everyone. In addition, Chinese and various Indian languages are spoken.
- **United States**, at the federal level, there is no official language, although there have been efforts to make English the official language. Use of several languages in electoral process under certain circumstances is provided for by federal law, including Spanish in the whole states of Florida, California and Texas.
  - The US state of California has Dymally-Alatorre Bilingual Services Act requiring state and local agencies serving a “substantial number of non-English speaking people” to employ a “qualified bilingual staff” and to translate certain documents into clients’ languages.
  - The US state of New Mexico provides certain guarantees for the use of Spanish, alongside English, in its constitution and electoral laws. Its state laws also provide for using Spanish and Native American languages in education
  - The US state of New York provides translation of vital documents and interpretation into six languages alongside English.
  - The US state of Texas provides in its law for translating to Spanish certain information on agency websites
  - The US state of Louisiana has mandated the Louisiana French Language Services Program and the Department of Culture, Recreation and Tourism to work on providing state government services in French, to the extent practicable It also expressly allows the use of French in legal process and publishing official documents.
Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- The Saint John River valley in the US state of Maine and some areas in Vermont are unofficially bilingual (de facto) in English and French.
- The US state of Hawaii is officially bilingual in English and Hawaiian.
- The US state of Alaska officially recognizes English and the following twenty Alaska Native languages: Inupiaq, Siberian Yupik, Central Alaskan Yup’ik, Alutiiq, Unanga, Dena’ina, Deg Xinag, Holikachuk, Koyukon, Upper Kuskokwim, Gwich’in, Tanana, Upper Tanana, Tanacross, Hän, Ahtna, Eyak, Tlingit, Haida, Tsimshian languages.
- Three US territories are also bilingual: American Samoa (Samoan and English), and Puerto Rico (Spanish and English). Guam Code provides for bilingual education (English and Chamorro). One US territory is trilingual: Northern Mariana Islands (English, Chamorro, and Carolinian).
- In the United States, states with a large historic (New Spain) and recently arrived Spanish-speaking population such as California, Nevada, Arizona, Colorado, and Florida will often provide government services at the municipal level in Spanish as well as English. For example, in Florida, Hialeah recognizes both English and Spanish while Miami recognizes English and Spanish as official government languages.
- Some Indian reservations in the US have begun to use indigenous languages of their tribal nations, but the official language of all the reservations is English. The most prevalent indigenous languages include Choctaw, Cherokee, Navajo, Muscogee, Lakota-Sioux and Iroquoian.
  - **Trinidad and Tobago** - in the predominantly Creole-speaking country where English is official, Spanish is being introduced as the second language of bilingual traffic signs and generally the "first foreign language".
  - **Uruguay** has a large Italian-speaking minority also proficient in Spanish. Its border with Brazil has a mixed Portuguese-speaking presence.
  - **Venezuela** has declared Spanish the official language, while there are some European and Arabic languages spoken in urban areas.

3. Asia

- **Afghanistan**: Pashto and Dari (Afghan Persian) are the official and most widely spoken languages. Other minor languages include Uzbek and Turkmens, Balochi and Pashayi, Nuristani (Ashkun, Kamkata-viri, Vasi-viri, Tregami and Kalasha-ala), Pamiri (Shughni, Munji, Ishkashimi and Wakhi), Brahui, Hindko, Kyrgyz.
- **Bahrain**: Arabic is the official language, and English is the most commonly used and studied second language, especially in education, international relations, and the media. In addition, Persian and Urdu are widely spoken.
- **Brunei**: Malay (official), English
- **Cambodia**: Khmer is the official language, but French is spoken by a minority and sometimes used in government and education.
- **China**: Standard Mandarin (Putonghua) is the official language and is spoken in all regions. It is used for official and formal purposes, by the media, and in education as the language of instruction. However, on money notes, there are texts both in Mandarin (Han) and in Mongolian, Tibetan, Uyghur, and Zhuang. In every locality and region, local varieties of Chinese are spoken in daily life. These range from being quite similar to Putonghua, such as Tianjin dialect, to those that are mutually unintelligible with Putonghua such as Jiangsu, Zhejiang and Shanghai dialect (Wu) or Guangzhou dialect (Cantonese). In the autonomous regions, minority languages are used (such as Tibetan in Tibet or Mongolian in Inner Mongolia, Uyghur, Kazakh and others in Xinjiang).
- **Hong Kong**: English and Chinese are official languages. All road signs are written in both languages. English is the dominant language in the judiciary and in higher education. Hong Kong Cantonese is the first language of the majority of the population, and is the dominant language in many aspects of everyday life. While Cantonese is the widely spoken form of Chinese in Hong Kong, Standard Mandarin is also taught in schools. The degrees of proficiency in English and Mandarin vary from person to person.
- **Macau**: both Chinese and Portuguese are official languages. While Cantonese is the dominant form of Chinese, Standard Mandarin (Putonghua) is also spoken. Chinese is taught in all schools, while Portuguese is mainly taught in government schools. In addition, English is also taught in many schools.
### Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- **East Timor** — Tetum and Portuguese are the official languages; English and Indonesian "shall be working languages within the public administration side by side with official languages as long as it is deemed necessary".

- **India**: There are 23 official languages in the states and territories of India (Including Hindi and English, the languages with official use in the whole federation). The largest, Hindi, is spoken natively by 40% of the population. English is also widely used, although mainly in urban parts of the country. An Indian with a high-school education would generally be bilingual — speaking their own native language, in addition to English, with varying fluency, possibly Hindi as well, the languages being compulsorily (in select states) taught in most schools and colleges. See Languages of India.

- **Indonesia** is the largest bilingual country in the world, with approximately 200 million people speak more than one language. Indonesian speak about 746 different languages. Javanese has the most users in terms of native speakers (about 80 million). But interestingly, the sole official (or so-called "unity language") is Indonesian which has only 30 million L1 speakers (compared to Indonesia 260 million population). The role of Indonesian is important to glue together different ethnicities and languages in Indonesia. Though Indonesian is considered the nation’s only official language, regional governments have rights to conduct regional languages study at schools. Many people in Indonesia are bilingual at an early age. They speak a local native language with their families whereas the official Indonesian language is used to communicate with people from other regions and is taught in schools as a compulsory subject.

- **Iran**: Persian is the sole official language, but Azerbaijani (along with related varieties such as Qashqai and Kalaj) has upwards of 15 million speakers. Other minority languages include Kurdish, Turkmen, and Balochi. Assyrian is spoken by a Christian minority in the vicinity of Urmia. In the southwestern Iranian province of Khuzestan, most people speak Khuzestani Persian, Khuzestani Arabic, and Standard Persian, sometimes in addition to their own community languages such as Lur, Qashqa’i, Domari or Mandaic where applicable.

- **Iraq**: Arabic is the official language of the state, Kurdish is the official language of the north where 4 million native speakers live. The use of Turkmen, Assyrian, and Armenian in education is provided for in the Constitution. Other languages also exist among Christian communities north of and around Baghdad, such as Aramaic.

- **Israel**: Arabic and Hebrew both have official status. Jewish immigrants to Israel (especially from Europe) have a different mother tongue, such as Arabic, Amharic, Yiddish, Ladino, Russian, Romanian, Polish, Ukrainian, English, or French and many Jewish immigrants from Latin America speak Spanish and Portuguese.

- **Palestine**: Arab population of Palestine speaks Arabic. Functionally, almost all Arabs in Palestine also speak Hebrew. English is widely spoken and understood as a second language by both Arabs and Jews. Officially, road signs must be in Arabic, Hebrew, and a Romanized Hebrew transliteration.

- **Lebanon**: Arabic is the official and national language; the Constitution provides for the conditions of using French to be provided by law. Many Lebanese are fluent in English and in French. Armenian is also a language mainly used in the Armenian community.

- **Malaysia**: nearly all people have a working knowledge of Malay and English. Malay is the official language of the country, along with English in the state of Sarawak. Malay and English are compulsory subjects taught in all public schools, and English is the language of instruction for science and mathematics. Chinese (Mandarin) and Tamil are spoken by the Chinese and Indian communities respectively, and are the languages of instruction in Chinese and Tamil primary schools respectively. Among the Chinese community, apart from Mandarin, several Chinese dialects especially Hokkien, Cantonese and Teochew and among the Indian community, apart from Tamil, several Indian dialects especially Punjabi, Malayalam and Telugu are spoken by the respective communities. The indigenous peoples of Sabah and Sarawak speak their ancestral languages (Dayak, Iban etc.). However, it is not uncommon for the locals to be fluent in several of the above languages. The Constitution provides for use of Sabah and Sarawak languages in native courts or for any code of native law and custom.

- **Pakistan**: The national language is Urdu; English was allowed to be used for official purposes until arrangements are made for its replacement by Urdu There are many regional languages and dialects (the latter are often unintelligible from other dialects of the “same language”). Many high-school and college
Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

Educated Pakistanis are trilingual, being able to speak English and Urdu as well as their own regional language with varying fluency.

- **Philippines**: The Philippine constitution designates Filipino as the national language and, along with English, as official languages. Regional languages are designated as auxiliary official languages in the regions which shall serve as auxiliary media of instruction therein. Spanish and Arabic are designated to be promoted on a voluntary and optional basis. Some people in native Tagalog areas are bilingual, while in non-Tagalog areas it is common to be multilingual in Filipino, English, and in one or more of the regional languages, or in other cases in languages such as Spanish, Minnan (Hokkien), and Arabic due to factors such as ancestry and religion. Eleven regional languages are recognised by the government as auxiliary official languages in their respective regions, while 90+ other languages and dialects are spoken by various groups.

- **Republics of Russia**:
  - Buryatia: Russian and Buryat are official languages
  - Altai Republic: Russian and Altay are official languages
  - Tuva: Russian and Tyvan are official languages
  - Khakassia: Russian and Khakas are official languages
  - Sakha Republic: Russian and Sakha are official languages

- **Singapore**: English, Mandarin Chinese, Malay and Tamil are all official languages. Malay is the national language. English is the main language used in Singapore. As English links the different races, a group with various races communicate using English. Most of the population can speak, read and write in English. In addition to English, many Singaporeans can speak their respective ethnic language fairly well, as it is a compulsory subject in school. In Chinese communities, the older generation usually speak their own dialects besides Mandarin and/or English.

- **Sri Lanka**: Sinhala and Tamil are official languages. English is referred to as the link language in the constitution.

- **Syria**
  - Rojava: the constitution of the de facto autonomous region designates Kurdish, Arabic and Syriac as official languages.

- **Taiwan**: Mandarin is the "official" language, but Taiwanese is commonly used in most people (especially adults and elders). In the Hakka community, some people are trilingual in Hakka, Mandarin and Taiwanese. Some 10 Aboriginal languages are also spoken in the mountain and eastern portion of the island. Their promotion and use are provided for by the Indigenous Peoples Basic Law in 2017, a law providing for the use of indigenous languages in 55 municipalities was adopted.

- **Tajikistan**: Tajik as the state language and Russian, designated as language of interethnic communication in the constitution, are widely spoken.

- **Thailand**: Thai is the main and sole official language in Thailand. There are different dialects such as Phitsanulok, Ayutthaya, Suphan Buri (traditional dialect), Thonburi, but Standard Thai is influenced by Thai Chinese in Bangkok, Isan which is influenced from Lao and widely used in the northeastern area, Southern Thai is spoken in the southern provinces, Northern Thai is spoken in the provinces that were formerly part of the independent kingdom of Lanna. Karen languages are spoken along the border with Burma, Khmer near Cambodia (and previously throughout central Thailand), and Malay in the south near Malaysia. The Thai hill tribes speak numerous small languages. Also, there is a big population of Chinese descent people in Thailand and the old generation often use Teochew as their first language. The new generation tends to speak them as a second language or some may not know it at all.

- **Kazakhstan**: Kazakh and Russian both have official status—Kazakh as the "state" language and Russian as "officially used on equal grounds along with the Kazak language".

- **Kyrgyzstan**: Kyrgyz is the state language and Russian "used in the capacity of an official language".

- **United Arab Emirates**: Arabic is the official language of the country, although English is an unofficial language it is widely accepted as the lingua franca as over 89% of the population is migrant. Almost everyone has a working knowledge of English. All road signs are written in both Arabic and English. English is the dominant in higher education and is a required ability for most local jobs. English is a compulsory subject in all public schools and is the language of instruction for mathematics and science.
## Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

- **Uzbekistan**: Uzbek (official), Tajik, and Russian are all widely spoken. Use of Russian (alongside Uzbek) is foreseen for notarized documents and civic records.
- **Karakalpakstan**: Karakalpak language is an official one, alongside Uzbek.
- **Vietnam**: Vietnamese is the official language, and English is the most commonly used and studied second language, especially in education, international relations, and the media. In addition, French is spoken by a small minority of people and elders as it used to be the most common second language. The right to use own language, also in courts, is foreseen in the constitution.

### 4. Europe

- **Albania**: has one official language, Albanian. Other languages such as Greek and Italian are heavily spoken without official recognition, yet are minority languages. Albania recognizes 6 minorities languages; Serbo-Croatian, Macedonian, Romanian, Hungarian, Greek and Italian. Majority Albanians are polyglots, speaking more than 3 languages, which is due to the high number of Albanian immigrants in Europe and elsewhere, as well as political, socio-cultural relations with their neighbors. Today, Albanians are considered one of the most linguistically diverse peoples in Europe. Italian is spoken by a large number of Albanians that have learnt the language by watching Italian television. Influx of Greeks in the country due to the Euro Crisis is elevating the status of Greek in the country. Albania is also part of the Francophonie, with 320,000 French speakers.
- **Andorra**: has one official language, Catalan. Other languages (mainly Spanish, Portuguese and French) are also spoken without official recognition.
- **Austria**: has one official language, German. However, it also has Croatian and Slovenian minorities, all of whose languages are protected under federal laws. Certain functions are also guaranteed for Romany, Hungarian, Czech and Slovakian in Vienna and Burgenland, under the European Charter for Regional or Minority Languages.
- **Belarus**: has two official languages: Belarusian and Russian.
- **Belgium**: has three official languages: Dutch (59%) in the north, French (31%) in the south and a small minority speaks German. Its bilingual capital, Brussels (10%), is mainly French, with Dutch as minority. These languages have the status of ‘official language’ only in specified language areas as defined by the constitution. In Flanders, 59% and 53% of the Flemings know French or English respectively; in Wallonia, only 19% and 17% know Dutch or English. In each region, Belgium's third official language, German, is notably less known than Dutch, French or English. Wallonia recognizes all of its vernacular dialect groups as regional languages, Flanders does not.
- **Cyprus**: has 2 official languages: Greek & Turkish. Both languages were spoken throughout the island before 1974. After 1974, and the partition of the island, Turkish became the sole official language in the Turkish-Cypriot-controlled north whereas the - internationally recognized - Republic of Cyprus retains both languages as official. English is also widely spoken and understood throughout the island.
- **Czech Republic**: several municipalities of Zaolzie area have official bilingualism (Czech and Polish). Bilingual signs are permitted if a minority constitutes at least a 10% of the population of the municipality.
- **Denmark**: has one official language, Danish, but in South Jutland, use of German for certain functions is provided for. In Greenland, Greenlandic is the principal language, while Danish must be thoroughly taught.
- **Estonia**: has one official language, Estonian, but there is also a sizeable Russian-speaking community (around 30% in 2000) who speak Russian. Russian and other minority languages can theoretically be used in communication with local government and state institutions within the borders of certain constituencies where most permanent residents belong to a respective national minority (Article 51 of the Constitution). Only citizens of Estonia are considered to belong to national minorities; thus, the provision is only applicable in three parishes and two towns. Many Estonians can speak Russian, but many Russians are not fluent in Estonian including those who are Estonian citizens, however fluency varies considerably between age groups.
- **Faroe Islands**: has two official languages: Faroese and Danish. The other Scandinavian languages, Norwegian and Swedish, are understood by most without much difficulty. English is taught in schools, often as a third language.
- **Finland**: is constitutionally bilingual and has therefore two equally national languages, Finnish and Swedish, and the minority languages Sami (Northern Sami, Inari Sami and Skolt Sami), Romani and Finnish Sign Language.
## Multilingual countries and regions (Monolingualism could solve ambiguities, diglossia, cultural, or political conflicts)

<table>
<thead>
<tr>
<th>Country</th>
<th>Official Languages</th>
<th>Regional Languages</th>
</tr>
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<tbody>
<tr>
<td><strong>France</strong></td>
<td>French</td>
<td>Breton, Basque, Alsatian, Provençal, Occitan, Greek, Albanian</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>German</td>
<td>Low Saxon, Sorbian, Frisian, Slovene, Romany, Slovak, Polish</td>
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<tr>
<td><strong>Ireland</strong></td>
<td>Irish, English</td>
<td>English, Welsh, Irish, Scottish</td>
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<tr>
<td><strong>Italy</strong></td>
<td>Italian</td>
<td>Venetian, Provençal, Occitan, Greek, Albanian, Slovene</td>
</tr>
<tr>
<td><strong>Kosovo</strong></td>
<td>Albanian, Serbian</td>
<td>Turkish, Roma, other languages</td>
</tr>
<tr>
<td><strong>Latvia</strong></td>
<td>Latvian</td>
<td>Lithuanian, Russian, Polish, Swedish</td>
</tr>
<tr>
<td><strong>Lithuania</strong></td>
<td>Lithuanian</td>
<td>Russian, Polish, Swedish, Finnish</td>
</tr>
<tr>
<td><strong>Luxembourg</strong></td>
<td>Luxembourgish</td>
<td>French, German, Russian</td>
</tr>
</tbody>
</table>

Language are recognized by the constitution. Swedish is spoken by a minority, about 5.5% native speakers (Swedes in Finland) concentrated along the coast and on the Åland Islands. Municipalities are bilingual if the Swedish or Finnish minority is at least 6–8%. Åland is monolingually Swedish by law. Sami is official language (besides Finnish) in the municipalities of northern Finland.

- **France** has a strict monolingual policy for the republic to conduct government business only in French. There are, however, levels of fluency in regional languages: Alsatian, Basque, Breton (the regional government of Brittany adopted some politics to promote teaching Breton), Catalan (the department of Pyrénées-Orientales has a particular charter for supporting Catalan), Corsican (teaching it in the island's schools is provided for by law), Flemish, Franco-Provençal, and Occitan (sometimes called Provençal). The country as whole is dominated by French linguistically.

- **Germany** has German as its official national language. Low Saxon (“Low German”) is recognized as a regional language in at least five north German states. Lower Sorbian is an official minority language in Brandenburg. Upper Sorbian in Saxony, Sater Frisian in a part of Lower Saxony, and North Frisian varieties and Danish in Schleswig-Holstein. A language without its own territory, Romany (including the language of the Sinte people) is an official minority language as well. Germany is home to large numbers of people from other regions, and some of their languages, such as Turkish, Russian, and Polish, are widely used throughout the country. However, those languages are considered foreign and thus are given no official status.

- **Gibraltar** is a British overseas territory whose sole official language is English. Given Gibraltar's size, most of the population is also fluent in Spanish due to its vicinity with Spain. Gibraltarians also use Llanito as their local vernacular.

- **Hungary** has Hungarian as its official language. The country recognizes Beás, Croatian, German, Romani, Romanian, Russian, Slovak, Slovene languages. Use of those languages for certain functions is provided for by law, applying to localities where the share of a relevant minority exceeds 10% or, for wider functions, 20%.

- **Ireland** has Irish as its official language. Irish is the first official language of Ireland. English is the first language of the majority of the population.

- **Italy** has Italian as its official language. Italian law n. 482/1999 recognizes and protects twelve minority languages, like Sardinian, Friulian, Occitan, Greek, Albanian and other linguistic minorities. Bilingualism is also applied in some territories:
  - In the province of South Tyrol German is co-official.
  - In the Aosta Valley region French is co-official, as is Slovene in some municipalities of the provinces of Trieste and Gorizia.
  - Ladin municipalities of South Tyrol are trilingual (Italian, Ladin, and German).
  - In Veneto, there is a regional law on Venetian linguistic and cultural heritage. In 2016, an additional law has been adopted, providing for the use of Venetian in schools, public institutions and toponymical signs.
  - In Calabria, there is a regional law on minority languages, with Greek, Albanian and Franco-Provençal specifically named.
  - In Piedmont, there is a regional law on promoting linguistic heritage, with Occitan, German, French and Franco-Provençal minorities specifically named.

- **Kosovo** has two official languages, Albanian and Serbian. Turkish, Bosnian, and Roma hold official status on a regional level.

- **Latvia** has one official language, Latvian. Liv language is recognized as an autochthonous (in the Livonian coast, it is allowed to form toponyms in Liv alongside Latvian); the others are defined as "foreign" in the Official Language Law, but there is also a sizeable minority with Russian as their native language - 37.3% of those answering the question on language used at home named Russian during the census (2011).

- **Lithuania** has one official language, Lithuanian. There is a small Polish-speaking minority among ethnic Poles. There is also a large number of fluent Russian speakers, primarily among older generations because of the Soviet era.

- **Luxembourg** is a rare example of a truly trilingual society, in that it not only has three official languages – Luxembourgish, French and German – but has a trilingual education system. For the first four years of school, Luxembourgish is the medium of instruction, before giving way to German, which in turn gives way to French. (In addition, children learn English and sometimes another European language, usually Spanish or
### Multilingual countries and regions (Monolinguism could solve ambiguities, diglossia, cultural, or political conflicts)

- Italian.) Similarly, in the country's parliament, debates are conducted in Luxembourghish, draft legislation is drafted in German, while the statute laws are in French.
- **Malta** has two official languages, Maltese and English. Italian is also spoken by a large percentage of the population.
- **Moldova**
  - Gagauzia — Moldovan, Gagauz, Russian
  - Transnistria — Moldovan, Russian, Ukrainian
- **The Netherlands** has four official languages. Dutch is the primary language, and West Frisian is recognized as a minority language and spoken by between 300,000 and 700,000 people. West Frisian is mostly spoken in the province of Friesland, where it is the official first language. Low Saxon is recognized as a regional language in the northeast of the country, and Limburgish is an official regional language in Netherlands Limburg. In Amsterdam, certain services are provided in English; English is official in the Dutch municipalities of Saba and Sint Eustatius. The fourth official language is Papiamentu, spoken on Bonaire.
- **Norway** - in six communes of Troms and Finnmark counties, Sami is used officially along Norwegian
- **Poland** — 20 bilingual communes in Poland (mostly Polish-German) speak forms of the German language. Belarusian, Czech, Hebrew, Yiddish, Lithuanian, German, Armenian, Russian, Slovak and Ukrainian are recognised as national minorities languages while Karaim, Lemko, Romani and Tatar as ethnic minorities languages.
- **Portugal** — although Portuguese is practically universal, Mirandese, a related Leonese language, is spoken in Miranda do Douro, northeastern Portugal and is officially recognized, and there is some familiarity with the Spanish language in border towns with neighboring Spain.
- **Romania**: the official language is Romanian, but significant minority languages are recognized on the local level, with commitments made in respect of use of Bulgarian, Czech, Croatian, German, Hungarian, Russian, Serbian, Slovak, Turkish and Ukrainian in areas where the share of their speakers is at least 20%. The biggest ethnic minority is the Hungarian community of 1.4 million (6.6%).
- **Republics of Russia** (Note: I also listed the Republics of Russia above under “Asia”, but the following regions are located on the European part of Russia. Russia, as you know, spreads over two continents: Europe and Asia):
  - Adygea — Russian and Adyghean are both official languages
  - Bashkortostan — Bashkir and Russian are co-official
  - Ingushetia — Russian and Ingush are co-official
  - Kabardino-Balkaria - Russian, Kabardian, Balkar are co-official
  - Tatarstan — Russian and Tatar are co-official
  - Kalmykia — Russian and Kalmyk are co-official
  - Karachay-Cherkessia — Russian (also as a language of interethnic communication), Abaza, Cherkess, Karachay and Nogai are all official
  - Mari El — Russian and Mari are co-official
  - Mordovia — Russian and Mordvin are co-official
  - Komi Republic — Russian and Komi are co-official
  - North Ossetia–Alania — Russian and Ossetian are co-official
  - Udmurtia — Russian and Udmurt are co-official
  - Chechen Republic — Russian and Chechen are co-official
  - Chuvashia — Russian and Chuvash are co-official
- **Serbia**: There are seven officially used languages in Vojvodina (Serbian, Croatian, Romanian, Ruthenian, Hungarian, Slovak and Czech), and four in central Serbia (Serbian, Bosnian, Albanian and Bulgarian). The northern autonomous province of Vojvodina has a multi-ethnic, multi-cultural and multi-lingual identity, with a number of mechanisms for the promotion of minority rights; there are more than 26 ethnic groups in the province. The province has six official languages. Some Serbs are recognised as fluent polyglot, many of them being able to speak German, French and English, due to the huge number of Serbian immigrants in Europe, especially in Austria, Germany and France, whilst English is quite popular due to the large Serbian immigrant community in Australia and Canada.
- **Slovakia** has a Hungarian minority of 520,000 (9.7%). Bulgarian, Croatian, Czech, German, Serbian, Hungarian, Polish, Roma, Russian, Ruthenian and Ukrainian languages are recognized as regional or
**Multilingual countries and regions (Monolinguism could solve ambiguities, diglossia, cultural, or political conflicts)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Official Languages and Recognized Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slovenia</td>
<td>Italian and Hungarian are recognized as regional or minority languages. In the coastal area (Koper, Izola and Piran) Italian is also an official language, in addition to Slovene. In the eastern part of Prekmurje, Hungarian is used as an official language next to Slovène. In the bilingual areas, all children are taught both languages.</td>
</tr>
<tr>
<td>Spain</td>
<td>Several autonomous communities have their own official language, additional to Spanish (also known as Castilian), official all over Spain (see: languages of Spain): Basque Country and Navarre: Basque, a language isolate. Balearic Islands and Valencian Community: Catalan (officially called Valencian in Valencia). Catalonia: Catalan and Aranese (Occitan). Galicia: Galician, sometimes considered as a variant of Portuguese. There are a number of languages which have official recognition of some kind but which are not fully official: Aragonese and Catalan in certain areas of Aragon. Asturian and, in some areas, Galician in Asturias. Leonese and, to a smaller degree, Galician in Castile and León.</td>
</tr>
<tr>
<td>Sweden</td>
<td>Has Swedish as its official language. Finnish, Meänkieli, Romani, Sami and Yiddish are recognized as minority languages. Meänkieli, a variant of Finnish, is spoken in Tornealeden and Haparanda in North Bothnia. Meänkieli, Finnish and Sami have a special status in the areas where speakers are significant minorities.</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Has four national languages; German, French, Italian and Romansh. The cantons Valais, Fribourg and Bern are bilingual (French and German), while canton Graubünden is trilingual (German, Romansh and Italian).</td>
</tr>
<tr>
<td>Turkey</td>
<td>The Constitution of Turkey defines Turkish as the only official language of the country (article 3) and explicitly prohibits educational institutions to teach any language other than Turkish as a mother tongue. The Constitution of Turkey also explicitly prohibits the use of Kurdish in education and broadcast media. In 2013, the Ministry of Education included Kurdish, Azeri, Adyghe and Laz languages to the academic programme of the basic schools as optional classes from the fifth year on. In 2010, Kurdish municipalities in the southeast decided to begin printing water bills, marriage certificates and construction and road signs, as well as emergency, social and cultural notices in Kurdish alongside Turkish. Friday sermons by Imams began to be delivered in the language, and Esnaf provided Kurdish price tags. Before August 2002, the Turkish government placed severe restrictions on the use of Kurdish language, prohibiting the language in education and broadcast media. In March 2006, Turkey allowed private television channels to begin airing programming in Kurdish. However, the Turkish government said that they must avoid showing children's cartoons, or educational programs that teach Kurdish, and could broadcast only for 45 minutes a day or four hours a week. However, most of these restrictions on private Kurdish television channels were relaxed in September 2009.</td>
</tr>
<tr>
<td>Ukraine</td>
<td>Russian, Hungarian and Romanian are granted status of a regional language in certain areas (Language policy in Ukraine). Carpathian Ruthenia, Ukraine, Slovaks living near Uzhhorod speak Ukrainian and Hungarian in addition to their mother tongue, Slovakian. In villages near Mukachevo Germans (Swabian dialect speakers) also speak Hungarian and Ukrainian.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>The only national language of the United Kingdom is English. However, there are several regional languages recognized: Wales: 611,000 Welsh speakers, including the majority of the population in parts of north and west Wales. English is widely used. Across Wales, both English and Welsh have equal official status; the priority given to each, for instance on road signs, is determined by each local authority. Ulster Scots, a variety of Scots, is spoken by some in Northern Ireland, but again English is far more commonly used and Ulster Scots is less actively used in media. Irish and Ulster Scots now both have official status in Northern Ireland as part of the 1998 Belfast Agreement; certain functions are granted to those two languages under the European Charter for Regional or Minority Languages.</td>
</tr>
</tbody>
</table>
It is evident that there could be greater harmony, especially in terms of communication, between the above regions should only one language was spoken. As previously stated, it is important to have a synoptic view of multilingualism around the world before we can think about spreading a new native language. Some regions are more linguistically diverse than others and would require special considerations on the part of the linguistic awareness campaign in terms of resources allocation. The campaign is after all an advertising effort aimed at selling a product, in this case an idea (a new international native language) by selecting the places that could best facilitate its promotion at the least possible costs. The following campaign plan brings these factors to bear and offers a strategy for carrying out efficiently the realization of the goals set both in the short and the long terms.
• Linguistic awareness campaign plan and strategy, with linguistic questionnaire survey

| Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world” |

**Note:** In this plan, I use “they” to refer to the overseeing entity or organization

1. **Current Situation/Background**

Before the organization that oversees the project maps out where it wants the awareness campaign to take them, they should be able, along with the campaign committee, to:

- Know why the international linguistic organization exists (its mission or what it does); what would it want to get out of the project in the long term? (its vision); what would be the impact on the world should it cease to exist?
- Define success (the achievement of the objectives set many decades from the start. Success will be malleable and fluid, will hit snags, and will not be a straight line. Many generations will contribute to the success, which, in this case, should be seen as a journey instead of a destination. However, how many countries will have adopted the new language as their official language; will the United Nations, UNESCO, etc. have adopted the new language as their only official language, will the new language be the universal language of science are parameters that should help define success in the near future. Ultimately, the world will be a much better place should it become truly monolingual, even though none of the founding fathers of the linguistic organization will be there to witness it
- Know the context (the environment changes, people, along with languages, change as well. Like success, the context will change overtime, and the campaign, which will outlive the founders of the movement, will need to be constantly proactive instead of reactive
- Know how they will proceed to deliver the right message to the right targets at the right time, many times (the targets will also be dynamic. New communication tools and techniques, new methods, and use of the latest technologies must be continuously envisioned)
- Do a SWOT analysis by figuring out:
  - What are their strengths and weaknesses and what strategy they will put in place to respectively exploit or correct them
  - What opportunities and threats will they face in the complex communications environment when they try to “spread the word” about their good work and the urgency of the issues they address? For example, keeping in mind that raising public awareness or educating the general public does not necessarily yield positive change, especially in the face of issues that cultural linguistics causes. In that regard, the campaign will need to know that the public, domestic and international alike, will be divided into 4 categories or groups:
    1. Friendly: adopts positive attitude toward the campaign or the project
<table>
<thead>
<tr>
<th>Linguistic Awareness Campaign Plan &amp; Strategy: “A single language for a better world”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Neutral: regroups people who are neither officially proponents nor opponents of the campaign or the project. Personally, they wouldn’t mind seeing something change, but they feel satisfied with the status quo. At the same time, these people are persuadable, meaning the campaign can easily make them change their mind if it strikes the right cord.</td>
</tr>
<tr>
<td>3. Disinterested: regroups people who don’t want to have anything to do with a potential new language, feel that no linguistic initiative can have an impact (positive or negative) on them.</td>
</tr>
<tr>
<td>4. Hostile: regroups people who oppose vehemently the campaign or the project by pretexting cultural hegemony, racism, imperialism, violation of sovereignty, etc.</td>
</tr>
</tbody>
</table>

Then, they will need to do the following:

1. Recognize that establishing a communication plan is the first step in ensuring a successful campaign.

2. Identify which process will be implemented (this is important because getting the message of the need for a universal language across the board will depend on good communication, which is dynamic and contingent on the situation, both within the international overseeing organization and the stakeholders). The following components of the communication process will be followed (further explained in communication objectives):
   - Source: the source will be responsible for the message, meaning putting it out there, to which targets and when?
   - Message: its content and its form. The message must be based around a single theme and must be clear and simple, brief, believable, compelling, and delivered by the right messenger (the internal environment or team).
   - Medium or channel: what tools or means will be used to convey the message?
   - Receiver: the recipient(s) of the message.
   - Feedback: response (or lack thereof) the organization will get from the receiver(s).
   - Environment: both internal and external, very important, especially for a project of such a scope.

3. Find out where they (or we) are now (survey or make an inventory of all spoken languages).
4. Is the world better off now than it would be should everyone has the same native language?
5. What are the pros and cons of multilingualism?
6. What are the pros and cons of monolingualism?
7. What has been accomplished so far from a linguistic point of view?
8. How effective have the previous linguistic unification initiatives been?

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39 A stakeholder is a person who has something to gain or lose through the outcomes of a planning process or project.
9. Overall Project’s Objectives

This linguistic unification strategy must support the specific objectives of the awareness campaign. The key targets of the project (they are developed in the “recommendations” section) are:

- Implementation and internationalization of the campaign
- Focus on the reasons for the campaign
- Make global literacy a priority
- Children first:
  - stress the importance of children in the expansion, the survival, and the success of the new language
  - emphasize the importance of their literacy and education
  - make teaching them the new language as early as possible a priority
  - highlight the importance of providing them with highly trained and competent teachers seen as coaches and who are well-paid, praised, and respected (an initiative similar to that of the Scandinavian countries)
  - promote the incorporation of modern technology in the classroom
  - show potential key to success by making the new language a core subject and mandatory, and by making its teaching based on listening comprehension and oral performance
  - highlight the necessity to provide them, especially those living in the least developed countries and with low human development index, with a decent life, meaning three meals per day, access to Internet, school equipment, etc. (see UNICEF’s Deprivation Index, page 207)

- Implementation of a linguistic prescriptive approach
- Technology, networking, and interface enhancement
- Target specific art, business, socio-economic, technological, and scientific fields (see Tertiary target below: section 11, Target public)
- View the whole effort as an international social movement and keep in mind that as such, it can either, receive a full response, face preemption, get a cooptation, or fail (these alternatives are explained in the section: “View the whole effort as an international social movement”)

10. Communications Objectives

Efficient and effective communication across the board is the key to the campaign’s success. The communication process should encompass both external communication (responsible for the transmission of information between the overseeing entity and the public or other umbrella organizations) and internal communications (responsible for effective communications among participants within the overseeing organization):

1. **External communication (tools and techniques)**
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- Television
- Radio
- Magazine
- Newspaper
- Internet and the organization’s website
- Social media (Facebook, Twitter, etc.)
- Annual reports, letters, etc.

The following external communication techniques must aim at:

- Building excellent public relations by having a positive impact on the public's perception
- Building the organization's image
- Accomplishing the organization's goal and mission
- Facilitating cooperation with potential speakers (of the new language) and stakeholders
- Providing information about the necessity of the new language and what it can help us realize as a species
- Avoiding a caveat emptor attitude whose aim would be to let the public discover itself the necessity of a global language
- Adopting a caveat venditor attitude instead by taking charge of thoroughly informing the public with honesty, fairness, and transparency, about the long-term benefits of a global language for our species
- Showing:
  - Attunement: apply the above strategies to create harmony with individuals, groups, and contexts
  - Buoyancy: expect lots of rejection and criticism, especially on the part of multilingualism fanatics and countries which take pride in their respective national languages, but be ready not to give up by focusing on the greater good for the greater number of people principle
  - Clarity or ability to make sense out of chaos or linguistic conflicts that might arise. This can be achieved by being proactive, meaning show an ability to find problems and to solve them before they arise.

- Avoiding information asymmetry by ascertaining that all information that both the overseeing linguistic entity and the campaign have, be shared with the public and, thus, making sure that the public is not at a disadvantage in terms of information. This can be viewed as an extension of the caveat venditor attitude

2. **Internal communication (Tools and techniques)**

- Intranet/Social Intranet
- Podcasts

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40 Human development index (HDI) is based on three major criteria: life expectancy, level of education, and income.
### Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- Web-Based Communication
- Ticketing, Issue Tracking and Case Software. ...
- Internal Blogs, Video and Audio. ...
- Gamification\
- Discussion Forums
- Chat rooms, Private and Group Messaging
- Special techniques:
  - **Reporting:** What regular reports will be distributed—who will handle the process and verify information? Who will receive these reports? And what is the process for implementing new reports?
  - **Alerts and updates:** What milestones or crises should trigger an alert? Who will receive these priority messages—and in what format will they be delivered?
  - **Stakeholders’ requests:** How is information from stakeholders processed? Do all participants have access to archived data? What is the process of making project changes?
  - **Transparent, public-facing information:** What information will be made public? Who will be responsible for tracking information and metrics?

- Survey the internal team and build consensus as to what communication methods work best for them. This could be done by:
  - Shortlisting a handful of communication channels (email, Slack, Skype, etc.).
  - Asking the team (including freelancers) to pick their preferred channel and from the shortlist.
  - Getting the rest of the team to adopt the majority-preferred channel.

The following internal communication techniques, if properly utilized during the linguistic campaign will:

- Help materialize the culture of the agency that oversees the linguistic project
- Help the participants understand the big picture and how they fit in
- Make the participants more productive by providing meaning to their work
- Produce better leaders
- Remain in control of the message and its origin
- Facilitate innovation
- Facilitate decision making

Given that clear, specific, and measurable objectives are key to the success of any communications strategy, when setting these objectives, whether the communications will be external or internal, or both, the overseeing agency that will be at the helm of the linguistic campaign awareness should:

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41 Gamification is the use of game mechanisms in other areas, especially websites, learning situations, work situations or social networks. Its purpose is to increase the acceptability and the use of these applications by relying on the human predisposition to games.
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- be realistic within the timeframe, budget and resources
- ensure the objectives are measurable

For example, the main objectives of the communications (both internal and external) must revolve around:

- Building awareness of the campaign among a wide but defined group of audiences and user groups.
- Securing the commitment of a defined group of stakeholders to the project’s aims.
- Influencing specific policies or policymakers around key aspects.
- Encouraging participation among researchers or partner bodies.
- Displaying a constant sense of urgency

All internal actors must be made aware of and involved with the following:

- Sufficient and available resources are provided by leadership to complete the plan
- Effective repetitive communication of the strategy throughout the organization
- Actions required to execute are clearly defined
- Clear accountability for execution of all of the initiatives (linguistic, cultural, educational, etc.)
- Organizational silos and an appropriate culture working together to execute with no turf wars
- Adequate performance monitoring (huddles) as the plan progresses
- Appropriate consequences or rewards for failure or success of the initiatives
- Unselfish and focused senior leadership across the organization chart
- A total commitment to the success of the plan by the sitting President of the international organization
- Approved strategies all working together towards a common vision

11. Target Public

The external targets described above will help the message spread throughout the world and motivate final targets and act upon it:

- Who would best help achieve the goals? All of them. It should a massive and long-term awareness campaign for the goals to be achieved.
- What demographic should be reached? All. Focus on children thanks to Pre-K, Kindergartens, and elementary school teachers who know best how to communicate with children; then, parents followed by the general public.

42 “Without a sense of urgency, it’s too easy to put off until tomorrow what should be acted upon today,” says Allen Hauge, president of Hauge Farms, Inc. As for Harvard Business School professor emeritus John Kotter, he describes it as “a gut level determination to act today.” It does not mean lighting a fire under someone by manipulating urgency through false crisis, instead, it’s about lighting the fire within and inspiring a sustainable will to change.
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- What is known about the best ways to reach them? They would be reached directly through schools, libraries (through special educational programs for school children, like reading sessions, language awareness, singing, and playing).

Targets should be described in terms of:

- current behavior
- level of awareness
- level of knowledge
- preferred methods for receiving information
- motivations/barriers to hearing and believing/accepting the information, if any

The overseeing entity, their message, goals, and the benefits of the results must be known by the public (like almost everybody has heard about the United Nations at least once in their lifetime). Targets must be understood by the campaigners. Their locations, cultures, and their expectations for the probability of success to be higher.

Primary Target – These are the key persons/groups the campaign communicates to directly. It can have more than one primary target.

For example: Parents, particularly mothers of children aged 0 – 6 years.

Secondary Target – Art, business, socio-economic, and scientific communities such as:

<table>
<thead>
<tr>
<th>Secondary Target</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>Global maritime industry</td>
</tr>
<tr>
<td>Biomedicine</td>
<td>Global publishing</td>
</tr>
<tr>
<td>Broadcasting (radio and television)</td>
<td>Global rescue (natural disasters)</td>
</tr>
<tr>
<td>Business</td>
<td>Global security</td>
</tr>
<tr>
<td>Computer industry</td>
<td>Global sports</td>
</tr>
<tr>
<td>Computer / video games</td>
<td>Humanities</td>
</tr>
<tr>
<td>Diplomacy economics</td>
<td>Human rights</td>
</tr>
<tr>
<td>Energy industry</td>
<td>International aid</td>
</tr>
<tr>
<td>Engineering</td>
<td>International banking</td>
</tr>
<tr>
<td>Environmentalism</td>
<td>International education</td>
</tr>
<tr>
<td>Film industry</td>
<td>International law</td>
</tr>
<tr>
<td>Global anti-terror operations</td>
<td>IT services, consulting</td>
</tr>
<tr>
<td>Global fashion industry</td>
<td>Natural sciences</td>
</tr>
<tr>
<td>Global finance and financial institutions (World Bank, IMF, Asian Development Bank, etc.)</td>
<td>Nuclear power industry</td>
</tr>
<tr>
<td>Global / international marketing</td>
<td>Popular music</td>
</tr>
<tr>
<td>Global / international trade</td>
<td>Social sciences</td>
</tr>
<tr>
<td>Travel and tourism</td>
<td></td>
</tr>
</tbody>
</table>

Tertiary Target – people of less importance that the campaign wishes to receive the linguistic campaign messages, people who will also benefit from hearing the messages or people who influence the target now or in the future.
## Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

If an internal group is targeted - which individuals, teams or departments are needed to be reached within the organization?

### 12. Key Message per Target

The body that oversees the campaign will fill out the following for each target it wants to communicate to.

Whether the target is external or internal:

**Note:** “They” refers to the overseeing entity or the campaign

- What is it that they want to change?
- What do they want the targets to know?
- What do they want them to feel - what perception do they want to create?
- What do they want them to do - what actions do they want as a result?

- Examples of a “result” could be the following:
  - Do they want to change the target’s attitude towards the project?
  - Do they want them to support the project?
  - Do they want to change the assumptions about the purpose of the project?
  - Do they want them to be motivated to take action or make a decision?
  - Do they want them to be involved?

### 13. Communications Mix

How does the campaign want to get the message across? Whether it’s preparing a 12, 24 or 36-month communications plan, what tools will it need to use during this timeframe? Its choice will depend on what it wants to achieve, the level and type of message it wants to communicate, and the profile of its target(s).

**External Communications Mix**

- **Press**
  - Press release
  - Radio
  - Opinion editorial
  - Features
  - Features advisories
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- **Online**
  - Other related websites
  - Multimedia: video, slideshows
  - E-mail newsletter

- **Advertising**
  - Print
  - Radio
  - Television

- **Print**
  - Brochures
  - Posters
  - Letters
  - Leaflets
  - Scientific reports
  - Etc.

- **Public Relations**
  - Event/Stunt
  - Endorsements
  - Telephone calls
  - conferences
  - Etc.

**Internal Communications Mix**

- Conference calls
- Face-to-face meetings
- Etc.

### 14. Promotion

Once the campaign has decided what its communications mix will be, it needs to determine how it will promote its linguistic “product or service”.

Promotion may need to be done on two levels: internally and externally. For example, if it needs to develop a website in order to meet its communications objectives, how does it intend on promoting the site throughout the Internet and social networks? What is its plan to drive external traffic to the site, if that is important?

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43 A publicity stunt is a planned event designed to attract the public's attention to the event's organizers or their cause. Publicity stunts can be professionally organized, or set up by amateurs. Such events are frequently utilized by advertisers, celebrities, athletes, and politicians.
15. Budget

Where possible, the following are to be listed:

- The amount of money available now [money = capital (cash, physical capital, and human resources)]
- The amount of money available in the future [money = capital (cash, physical capital, and human resources)]

### Linguistic Awareness Campaign’s Pro Forma Budget for the year 20____

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Total Project Expenses</th>
<th>Amount Requested from Funders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salary and Benefits</strong> (include contract positions as well, and fringe benefits for both employees and consultants)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Contract Services</strong> (consulting, professional, fundraising)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Occupancy or Facility</strong> (rent, utilities, maintenance)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Training &amp; Professional Development</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Insurance</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Fundraising fees</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Staff Travel</strong> (mileage payouts, hotels, food per diems, babysitting costs)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Supplies, Materials, Printing, Photocopying &amp; Postage</strong> (include letterhead, printer cartridges, and other daily use costs)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Marketing</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Publicity / Advertising</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Conferences, meetings, etc.</strong> (include participant travel, childcare expenses, facility rental, food, flip chart paper, markers, etc.)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Honoraria</strong> (payments given for professional services that are rendered nominally without charge)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Other</strong> (to be listed by item)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>TOTAL ESTIMATED PROJECT EXPENSES</strong></td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Committed</th>
<th>Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government grants &amp; contracts</strong></td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual contributions (the average person, the wealthy, and the philanthropist)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Fundraising events &amp; products</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Membership and program income</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>
| **Revenue from exempt-purpose activities**  
  (activities that directly advance the organization’s stated mission. This mission must be stated and described in the organization’s application for tax-exempt status recognition as submitted to the IRS, and the IRS refers back to this application to determine which activities are exempt-purpose ones) | $   | $     |
| **Other**  
  (to be listed by item) | $   | $     |
| **TOTAL ESTIMATED PROJECT REVENUES** | $ _______ | $ _______ |

16. Timeline

- When will the agency need to communicate over the next 12, 24 or 36 months? They must list the key dates - what do they need and when

- They must describe each key event or activity that will need communications (including launch of a report, forum, conference, etc.)
  - What:
  - Why:
  - Where:
  - When:
  - Who:
  - How:
  - Target:
  - Objective:

---

44 Budget evaluation refers to the final stage of the budget cycle when there is an assessment of whether public resources have been used appropriately and effectively. There are costs associated with it.

45 Apply in particular to branches operating in the US.
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

- Key Message(s):
- Media Strategy:
- Tools and Materials:

- Under this section, they can also attempt to identify, or at least anticipate, any communications opportunities that may emerge from the actions of others working in their area. They should describe those opportunities here.

17. Being on Brand

How are they going to ensure that their communications (external and internal) will be on brand?

Presenting their brand correctly is crucial. This means being consistent with their logo, typefaces, slogan, colors, and “on-brand” with their key messages and the way they use words and images on all applications. All this will combine to communicate the sort of organization they are – active, passionate, cultural, eclectic, humanist and humanitarian, and solutions oriented.

When communicating with their target, they must follow this simple checklist and ask themselves:

- Is our message **passionate**? Does it really show our enthusiasm?
- Is it **optimistic**? Is it positive and forward looking?
- Is it **inspirational**? Will it move someone to take action?
- Does it **challenge**? Does it confront the issues?
- Is it **credible**? Will people believe us?
- Is it **accountable**? Does it demonstrate our honesty and trustworthiness?
- Is it **persevering**? Does it prove our commitment?
- Is it **delivering results**? Does it show what we have achieved?

They should keep in mind that their checklist of the characteristics of their message does not need to include all of the above. In other words, they do not need to reflect the value of each component of the mission in their message. However, they may find themselves in a situation where adding more components to the list above may be helpful.

18a. Evaluating Success

How will they know if they have succeeded and met their objectives? How are they going to evaluate their success, what performance indicators and evaluating measures will they use?
Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

It's important that they assess their strategy/project so that any changes, if necessary, can be made when engaging in a similar strategy/project in the future, as it might the case considering that languages change according to the environment.

External

- Have they achieved their objectives (i.e. raise funds, create awareness...etc.)?
- Did they reach the right target? The evaluation of their target audiences will help them determine which groups of people or individuals they are having the greatest success engaging in the campaign or in the project, so that they can refocus energy where it is generating the most success
- Did they use the right tools?
- If the right target has not been reached, were decisions taken as a result?
- The actual or potential opportunities and threats presented by the external environment, which have been identified, measured, and analyzed before the launch of the campaign, have they been respectively exploited, or dealt with or controlled?
- Has the campaign created a multiplier effect? (For example, has the reach of a particular target caused other not yet or untargeted groups to become aware of the campaign and its mission?)
- Etc.

Internal

- Did they reach the right people within the organization?
- Did the latter understand what the message was? Did they do what had to be done?
- Did they use the right tools? (The evaluation of their strategies and tactics will likewise provide them with feedback on how well the activities and projects they have undertaken are working)
- Has there been synergy among the members of the campaign in the accomplishment of their mission?
- The campaign’s actual or potential strengths and the weaknesses that have been identified, measured, and analyzed before the launch of the campaign, have they been respectively put to use or dealt with or controlled?
- Etc.

18b. Linguistic Questionnaire Survey

A key tool for external success evaluation is to conduct regular (annual, biennial, or every 5 years) linguistic surveys to the public by having world governments collect responses to specific questions likely to provide insight into the project’s progress and success. The following questionnaire could be used for this purpose (I did not include everything because I think it can be adjusted according to the communities and regions surveyed):

---

46 Coordinated action of several elements for a common purpose.
SECTION I: Language Vitality and Endangerment within the reference community

Reliability Index - the assigned score is based on:
3 Evidence from fieldwork and direct observation
2 Evidence from other reliable sources
1 Very little evidence; a ‘best guess’
0 No data available [no score provided]

<table>
<thead>
<tr>
<th>1a. Overall vitality / endangerment score:</th>
<th>Reliability Index:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>The language is safe</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Unsafe / vulnerable</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Definitely endangered</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Severely endangered</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Critically endangered</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Extinct</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1b. Most prominent threat(s) to the universal language (check all that apply):</th>
<th>Reliability Index:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence of local and foreign languages</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Negative attitude from the majority</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Government’s indifference</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lack of interest from young people</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Number of global language users</th>
<th>Reliability Index:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please provide the number here for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Number of global language users in this reference community</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b) Absolute number of users of the global language</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Proportion of speakers within the reference community</th>
<th>Reliability Index:</th>
<th>Comments (including the size of the reference community, if known)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Nearly all use the global language (&gt;=90%)</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>The great majority use the global language (70%-90%)</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>A majority use the global language (50%-70%)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>A minority use the global language (30%-50%)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Very few use the global language (&lt;30%)</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>None use the global language (i.e. the language does not exist)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4a. Generational or age-group language use</th>
<th>Reliability Index:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>All generations / age groups, including most children, use the language competently</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Most adults and some children use the language competently</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>There are few child speakers, and many in the parent generation / age group have considerable influence from language contact with other languages</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Only some in the parent generation / age group, and older, use the language competently</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Only grandparents and older generations / age groups use the language competently</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Nobody uses the language any more</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4b. Generational language use</th>
<th>Reliability Index:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>From the generation of the oldest speaker down to the youngest, all generations use the language competently. The oldest speaker may belong to any age group, and there may be no speakers older than that age group, due to the recent emergence of the language.</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>A substantial sub-section of age groups from the oldest speaker “downwards” uses the language competently, but the language is starting to be lost from some age groups e.g. the youngest uses.</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>A smaller sub-section of age groups from the oldest speaker “downwards” uses the sign language competently, and the language has been lost in several age groups.</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>There are only some speakers left in the age groups from the oldest speaker “downwards”, and most have shifted away from the language.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Only a handful individuals still use the language, and everyone else has shifted to other language(s).</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Nobody uses the language any more</td>
<td></td>
</tr>
</tbody>
</table>
### Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

<table>
<thead>
<tr>
<th>5. Domains of language use</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>6. New domains, i.e. new media, including broadcast media and the Internet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Materials for language spread and education</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Governmental and institutional language attitudes and policies including official status and use</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Reference community members’ attitudes towards the universal language</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>2</td>
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<td>1</td>
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<tr>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Type and quality of documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>2</td>
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<tr>
<td>1</td>
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<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>11. Status of language programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>2</td>
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<tr>
<td>1</td>
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<tr>
<td>0</td>
</tr>
</tbody>
</table>

**Note:** A language program is a program that aims to promote the use and maintenance of the language. This can take various forms such as language summer schools for students, summer camps with language elements for children, mentoring of younger speakers by older speakers.
**Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”**

Promoting global language teaching (e.g., “global language week”), or global language competitions (e.g., poetry, theatre, comedy). Language programs can be located inside or outside formal schooling.

-------------------------------

**SECTION II: Linguistic Diversity**

In this section, please describe the reference community as above in Section I. (If you do not have enough information to complete Section II, please return Section I only.) Assign scores for the following factors (where possible and where relevant) to characterize the linguistic situation and experience in the reference community:

(a) External diversity, i.e., linguistic environment:

<table>
<thead>
<tr>
<th>12. In everyday life, how many languages would a typical member of this community use?</th>
<th>Global language</th>
<th>Read/Write</th>
<th>Speak</th>
<th>Reliability Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more languages</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 languages</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3 languages</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
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<tr>
<td>2 languages</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1 language</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0 It is not possible to define a typical community member</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** This may be identified in detail through focal following, or may be estimated on the basis of interviews, personal experience, etc. A ‘typical member’ might be described as someone who is accepted by the majority of the sign language community, and would be identified by them unequivocally as a user of the language, but there may be situations where a ‘typical member’ cannot or should not be defined.

<table>
<thead>
<tr>
<th>13. In how many languages is a typical member of this community at least partially fluent?</th>
<th>5 or more languages</th>
<th>4 languages</th>
<th>3 languages</th>
<th>2 languages</th>
<th>1 language</th>
<th>Reliability Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>0</td>
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</tr>
</tbody>
</table>

**Note:** Partially fluent is here defined as able to engage in basic conversation and understand most of what is said.

<table>
<thead>
<tr>
<th>14. How many languages are represented in the local schools that are attended by children?</th>
<th>Tolerated</th>
<th>Taught as subject</th>
<th>Used for instruction</th>
<th>Reliability Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 or more languages</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 languages</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3 languages</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2 languages</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1 language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The term ‘tolerated’ means that using the language at school is not prohibited. If there is differential information for mainstream schools and boarding schools, mention this in the comments.

<table>
<thead>
<tr>
<th>15a. How many languages are represented in the local media?</th>
<th>TV</th>
<th>Radio</th>
<th>Print</th>
<th>Internet</th>
<th>Reliability Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5+ languages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 languages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3 languages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
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<tr>
<td>2 languages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1 language</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Local media includes nationwide media.

<table>
<thead>
<tr>
<th>15b. How is the global language represented on television?</th>
<th>Regular broadcast time is assigned and being expanded continuously.</th>
<th>The global language appears irregularly, in an ad hoc way.</th>
<th>The global language is discounted.</th>
<th>Sign language never appears on television</th>
<th>Not applicable – television is not available.</th>
<th>Others (please describe in the comments box)</th>
<th>Reliability Index</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Local media includes nationwide media.

<table>
<thead>
<tr>
<th>15c. What kind of official support and specific resources for the target global language exist outside education, legislation and the media?</th>
<th>Language board or similar body</th>
<th>Global language association or organization</th>
<th>Publishing in global language, e.g., Bible translation, DVDs, or online publication</th>
<th>Internet-TV channel or similar outlet</th>
<th>No official support outside education, legislation and the media</th>
<th>Not applicable</th>
<th>Others (please describe in the comments box)</th>
<th>Reliability Index</th>
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Linguistic Awareness Campaign Plan & Strategy: “A single language for a better world”

(b) Internal diversity in the language:

| 16. Would you say this language is characterized by high internal (dialectal) or idiolectal diversity? | 5 | Very high internal / idiolectal diversity | Reliability Index: 3 | Comments |
| 4 | High internal / idiolectal diversity | 2 | Moderate internal / idiolectal diversity | 1 | A little internal / idiolectal diversity |
| 3 | 1 | Virtually no internal / idiolectal diversity | | |

| 37. In how many global language dialects is a typical member of this reference community fully or partially fluent? | More than 2 dialects | Reliability Index: 3 | Comments |
| 2 dialects | 1 dialect | It is not possible to define a typical community member | 1 | 0 |

**Note:** The first generations of speakers won’t probably have time to effectively create dialects out of the new global language, but this question is still important (or will eventually be relevant) since the linguistic campaign is set to be indefinite, like UNESCO’s education campaign is ongoing.

| 18. How equal are the dialects in numbers of users? | 5 | Each dialect has equal numbers | Reliability Index: 3 | Comments |
| 4 | Several dialects have sizable numbers of users | 2 | One dialect predominates, but other dialect(s) have good numbers of users | 1 | Over two thirds of users use one dialect |
| 3 | 1 | One dialect is used by virtually all users | |

End of linguistic awareness campaign plan

Make global literacy a priority

There are different views regarding the relationship between language and literacy. While some think there is a close relationship between the two, others, like David Crystal, think otherwise. He argues that “Literacy is in no way necessary for the maintenance of linguistic structure or vocabulary, though it does enable people to add words from the common written stock in dictionaries to their personal vocabulary very easily. It is worth emphasizing that until relatively recently in human history all languages were spoken or signed by illiterate speakers and that there

Times have changed. In the 21st century, literacy is the norm.
is no essential difference as regards pronunciation, structure, and complexity of vocabulary between spoken or signed languages that have writing systems used by all or nearly all their speakers and the languages of illiterate communities.” To adhere to this view, I would like to add the fact that we all managed to speak our mother tongue in the first years of our lives without any books whatsoever. Personally, as a linguist, I give more importance to speech than to written materials. However, while the view that speech overshadows writing in linguistics is true to some extent, times have changed and in the 21st century, literacy is the norm. A good command of a language always involves good reading and writing skills. If learning our mother tongues does not require one to be literate, mastering it and be able to have a substantial conversation on specific topics such as philosophy, literature, sociology, or information technology, etc. do require an adequate level of knowledge in a language. We are surrounded by writings, and it would not be possible for any scientific field to advance without writings. Literacy is important to language for the same reason if it was not for the invention of writing, history, as a science, would not exist. Today, we differentiate between Prehistory and Antiquity because of writing or literacy. The importance of writing or literacy is also expressed by the fact that all of the languages that are extinct today only had native speakers but didn’t have a written form.

Furthermore, the minority and tribal languages that are currently endangered are endangered because they are only used verbally, but not for writing purposes. My goal here is not to glorify writing to the detriment of speech. On the contrary, writing stemmed from speech, not the other way around. For example, in every country on our planet, 100% of their people have a native language albeit all of them may not be literate (except for Finland, of course, with 100% literacy). Despite the fact that language comes first, illiteracy should not be overlooked. Literacy should prevail and must be prioritized. The distinction between formal (how language should be used) and informal (how language is actually used) styles within a language is necessary to its development. How language should be used or prescriptive linguistics⁴⁷ and how language is actually used, or descriptive linguistics make both language and literacy complementary to each other.

As we saw above, illiteracy is still a plague in most of our world, even in parts of some of the most industrialized countries. Eradicating it must be first envisioned before any attempt to transform our current multilingual world into a monolingual one. Our goal must be perfect literacy instead of functional literacy. Perfect literacy is the ability to read and write effectively. Functional literacy is the minimum level of reading and writing required to function effectively in a world dominated

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⁴⁷ Western prescriptive linguistics originated from 17th-century France and Britain. In France, pure, standard, and acceptable French was the language spoken by the Royal Court. In Britain, standard and acceptable English was the language promoted by William Shakespeare. Both French and English prescriptive linguistics led to what is called Prescriptive Grammar, which itself originated from the Latin model (Latin grammar).
by written material. However, since no matter what, the degree of literacy and education will always differ among people, therefore, a Finite-state grammar could also be conceived, along with a formal prescriptive grammar, to facilitate the acquisition of the new language by the less educated. A finite-state grammar is a deliberately oversimplified form of generative grammar, which generates sentences by working through word by word in a strictly linear fashion. It was used by Chomsky to illustrate the need for more complex features, such as transformations, to account adequately for real language. No matter the type of grammar, it would have to be realistic or psychologically real, that is, it would need to contribute to the explanation of such areas of linguistic behavior as comprehension and memory.

In addition to educational and learning tools, the literacy effort must be conducted not only at an international level, but also at an individual level. Internationally, there is already a network system whose goal is to channel educational aids towards disadvantaged children around the world. UNESCO, for example, has been, since 1945, playing and continues to play an important role in the promotion of literacy and education in the world. According to Lindsay L. Kennedy, “International Literacy Day has been celebrated on September 8 since 1966. The aim is to highlight the importance of literacy to individuals, communities and societies around the world. It’s also an opportunity to reflect on how far we’ve come, and where we need to go next [...] The United Nations International Literacy Year was celebrated in 1990, and at the time both the federal and provincial governments were paying a lot of attention to literacy. In 1987 the Southam newspaper chain had commissioned a survey on adult illiteracy in Canada and published a series of articles that were reprinted as "Broken Words: Why Five Million Canadians Are Illiterate,” by Peter Calamai. These articles shocked the country and brought the issue to public attention. By 1990 there was significant funding available for literacy initiatives [...] The use of the word ‘illiterate’ is a marker of this era. People were divided into two groups: those who were literate and those who were not. This dichotomy supported a corresponding response: that literacy could be delivered to those who were illiterate -- as if literacy were an object and the illiterate were empty vessels that could receive the written word -- if they just attended the right program.”

Empowered by the United Nations, UNESCO would certainly be a leading figure in the “A single language for a better world” movement because they already embrace universality, which, according to Irina Bokova, Director-General of UNESCO, “is the one of the great strengths of the United Nations. In essence, it is about shared goals and commitments, and about a shared vision between all member states.” In a publication dated November 2011, UNESCO and Education – Everyone has the right to education, Qian Tang states: “A quality education throughout life is the birthright of every woman, man and child. In turn, education, particularly that of girls and women, aids progress across all development goals [...] UNESCO’s mandate covers all facets of education. The Organization offers guidance and expertise to policy-makers and other stakeholders, and helps countries to plan, build and rebuild education systems that are responsive to a rapidly changing world. In particular, UNESCO leads the global Education for all movement, and promotes a
5. Recommendations

Make Global Literacy a Priority

holistic and inclusive vision of lifelong learning that includes early childhood care and education, primary, secondary and higher education, youth and adult skills, adult literacy, gender parity and quality education.” In 2011, the United States lost its voting rights and withdrew all supports to UNESCO, because Congress enacted laws in the 1990s decreeing that the United States stop providing money to any United Nations agency that accepts Palestinians as full members. According to The New York Times, before withdrawing its financial support, the United States provided about $70 million, or 22 percent, of the agency’s annual budget, and the suspension was felt almost immediately. Some UNESCO staff members were laid off and programs and projects delayed, including some that potentially could have benefited the United States. On October 12, 2017, The United States’ State Department announced that the US will withdraw from UNESCO for good at the end of 2018. It’s possible that in the future the United States reinstates its financial aids to UNESCO. Meanwhile, the problematic caused by lack of finance and the risk of losing contributors can be offset by individual responsibility and engagement if the democratization of a single and universal native language becomes our goal. A massive volunteering campaign would to be put in place to motivate people from all walks of life to pitch in.

In countries where most people are literate, individual contributions could be made in the form of financial aid and educational tools and equipment to countries where illiteracy prevails; and within these countries, the literate could take upon him to educate a child or to volunteer in public schools. According to Global Citizen, “Ensuring global literacy is everyone’s responsibility. Literacy is empowering, but someone can only become literate with the help of another person. Everyone who can read and write can point to the people in their life who taught and guided them, who opened the world of literacy’s possibilities. Many people who are illiterate simply do not have anyone in their life who can teach them, making illiteracy a generational problem. It’s not their fault they do not receive the guidance. Therefore, it is up to all of us to make sure people without the resources and connections receive a robust education.”

I would recommend that industrialized countries experiencing illiteracy follow the Nordic countries’ educational model. According to World Book Encyclopedia, since it implemented huge education reforms in 1971, Finland's school system has consistently come at the top for the international rankings for education systems. So how do they do it? It's simple — by going against the evaluation-driven, centralized model that much of the Western world uses. Finnish children don't start school until they are 7 years old. Compared with other systems, they rarely take exams or do homework until they are well into their teens. The children are not measured at all for the first six years of their education. There is only one mandatory standardized test in Finland, taken when children are 16. All children, clever or not, are taught in the same classrooms. Finland spends around 30 percent less per student than the United States. 30 percent of children receive extra help during their first nine years of school. 66 percent of students go to college (the highest rate in Europe). The difference between weakest and strongest students is the smallest in the World. Science classes are capped at 16 students so that they may perform practical experiments every
class. 93 percent of Finns graduate from high school (17.5% higher than the US). 43 percent of Finnish high-school students go to vocational schools. Elementary school students get 75 minutes of recess a day in Finnish versus an average of 27 minutes in the US. Teachers only spend 4 hours a day in the classroom, and take 2 hours a week for "professional development". Finland has the same number of teachers as New York City, but far fewer students. The school system is 100% state funded. All teachers in Finland must have a Master’s degree, which is fully subsidized. The national curriculum is only broad guidelines. Teachers are selected from the top 10% of graduates. Teachers are effectively given the same status as doctors and lawyers. In an international standardized measurement in 2001, Finnish children came top or very close to the top for science, reading and mathematics. Finland consistently come top or very near every time since. And despite the differences between Finland and the US, it easily beats countries with a similar demographic. And despite the differences between Finland and the US, it easily beats countries with a similar demographic. Neighbor Norway, of a similar size and featuring a similar homogeneous culture, follows the same strategies as the USA and achieves similar rankings in international studies.

According to a study conducted by Central Connecticut State University, “The World’s Most Literate Nations (WMLN), “the first to analyze large-scale trends in literate behavior and literacy in more than 60 countries, finds the Nordic countries (Finland, Norway, Iceland, Denmark, and Sweden,) are among the five most literate nations in the world, while the U.S. and Canada rank 7th and 11th respectively. The study, conducted by John W. Miller, president of Central Connecticut State University in New Britain, Connecticut, is used as a lens to view literate behaviors and their supporting resources -- five categories such as size and number of libraries and newspaper readership. ‘The power of literacy and the value of being part of a literate world is often taken for granted,’ observes Miller. Much of his academic work during the past 40 years has been devoted to literacy issues. For the past 12 years, he produced the highly regarded ‘America’s Most Literate Cities’ survey (2003-2014), in collaboration with CCSU’s Center for Public Policy and Social Research. The team examined data for 200 countries, but due to lack of relevant statistics, only 61 made the cut. ‘The factors we examined present a complex and nuanced portrait of a nation’s cultural vitality, and what the rankings strongly suggest and world literacy demonstrates,’ Miller explains, ‘is that these kinds of literate behaviors are critical to the success of individuals and nations in the knowledge-based economics that define our global future’.”

One consistent finding, according to Miller, is that “there is no meaningful correlation between years of compulsory schooling and educational expenditures on the one hand and test scores on the other. Finland, Norway, Iceland, Denmark, and Sweden earn the five top slots in the study, largely because ‘their monolithic culture values reading,’ Miller says. He also points out that the rankings would be “very different” if educational outputs (PIRLS and PISA) were the only indices used. ‘The Pacific Rim countries, Singapore, South Korea, Japan, and China, would top the list if test performance was the only measure. Finland would be the only non-Pacific Rim country to rank high,’ he states, and adds, ‘When factors such as library size and accessibility are added in,
the Pacific Rim nations drop dramatically.’ The Western Hemisphere countries do not fare well overall in the study. Mexico ranks 38th, Brazil 43rd, and Costa Rica comes in at 46th. For the U.S., Miller says, while the years of compulsory education have increased, the practice of literate behaviors has decreased, and the ability to read stays relatively the same. ‘It is not so much that we are slowing down in this world race, but rather that others are speeding up,” he emphasizes.’

It’s possible for global literacy to come to fruition thanks to technological innovation and especially innovation in the learning process and requirements. Situated learning, schooling based on questioning and discovery must be prioritized over schooling based on instruction alone. Students shouldn’t feel burdened or overwhelmed by the learning process. Kelly Day shared her Finnish experience publicly on her blog Fillingmygap.com in a post entitled 11 Ways Finland’s Education System Shows Us that Less is More by saying: “When I left my 7th grade math classroom for my Fulbright research assignment in Finland I thought I would come back from this experience with more inspiring, engaging, innovative lessons. I expected to have great new ideas on how to teach my mathematics curriculum and I would revamp my lessons so that I could include more curriculum, more math and get students to think more, talk more and do more math...This drive to do more and More and MORE is a state of existence for most teachers in the US….it is engrained in us from day one. There is a constant pressure to push our students to the next level to have them do bigger and better things. When I arrived in Finland I did not find big flashy innovative thought provoking math lessons. I did not find students who were better at mathematics or knew more math content. In fact, the Jr. High and High school math classrooms have been rather typical of what I have experienced in Indiana. And most of the struggles (like students not remembering their basic math facts) were the same. The instruction and classroom structure of a math classroom in Finland follows the basic formula that has been performed by math teachers for centuries: The teachers go over homework, they present a lesson (some of the kids listen and some don’t), and then they assign homework. While some lectures have been wonderful, and I have gotten to observe some fantastic teachers, I would say that on the whole I have seen more engaging and interactive secondary math instruction from teachers in the United States. It is rare to see a math lesson that is measurably better than those found in my district and I have seen several that were actually far worse...So, what is the difference? If the instruction in secondary mathematics is the same or sometimes worse than those found in the US, why are Finnish students succeeding and ours are failing? The difference is not the instruction. Good teaching is good teaching and it can be found in both Finland and in the US. (The same can be said for bad teaching.) The difference is less tangible and more fundamental. Finland truly believes “Less is More.” This national mantra is deeply engrained into the Finnish mindset and is the guiding principal to Finland’s educational philosophy...Less is more...They believe it. They live by it. Their houses are not larger than what they need in which to comfortably live. They do not buy or over consume. They live simply and humbly. They don’t feel the need to have 300 types of cereal to choose from when 10 will do. The women wear less make-up. The men don’t have giant trucks (or any vehicles
5. Recommendations

Make Global Literacy a Priority

at all, really). Instead of buying hundreds of cheap articles of clothing the Finns buy a few expensive items of high quality that will last for decades rather than months. They truly believe and live by the mentality of less is more.”

Global literacy could be a catalyst for the emergence of a single and global native language as it would make most of us realize how far we’ve come and how much closer we can be thanks to a universal language. Global literacy may someday be the ultimate bridge between every country on Earth for the simple fact that humans would be able to understand one another more efficiently and unequivocally. Illiteracy is a dark and invisible curtain when it comes to fathom cultures other than one’s own. While the illiterate individual might be shut himself off, be scared or the defensive when interacting with others, the literate person is more open and embracing; and that is a definite plus in terms of language skills acquisition. The U.S. needs to reclaim its leadership within UNESCO. It also should serve as model by revamping its educational system in order to totally eradicate illiteracy.

In terms of Public expenditure on education as a percent of GDP, World Atlas reported in 2017 that “According to a recent report by the United States CIA’s World Factbook, the world leaders in terms of financial inputs into public education relative to GDP are those countries spending over 10% of total value of all goods and services produced within their borders on education. These countries include Lesotho, Cuba, Kiribati, the Marshall Islands, and Palau, among others. According to a UN World Bank report, in 2008 the public spending on education expressed as a percentage of GDP in Lesotho was 12.98%. Public expenditures on education in Lesotho consist of government spending on educational institutions, both private and public, educational administration, and subsidies for private entities involved in pedagogy. The CIA World Factbook report affirmed this, registering Lesotho as having the highest percentage of relative educational expenditures (13% of GDP) which was the highest of all countries. This indicated a slight increase in the government’s relative expenditures on education from recent years […] In 2013, the same report compiled by the UN World Bank indicated that Cuba was a world leader in making

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48 My guess is, here, Ms. Day is alluding to the Lagom philosophy to illustrate her point. This is, in fact, relevant, considering the essence of that philosophy. The Lexin Swedish-English dictionary defines lagom as "enough, sufficient, adequate, just right”. Lagom is also widely translated as “in moderation”, “in balance”, “perfect-simple”, and “suitable” (in matter of amounts). Whereas words like "sufficient" and "average" suggest some degree of abstinence, scarcity, or failure, lagom carries the connotation of appropriateness, although not necessarily perfection. It describes a philosophy of life that pervades Swedish culture; a word which could be a powerful design term if manifested effectively in consumers lifestyles. It’s the Swedes idea of achieving a balance between what we want and what we need – life in moderation. Applied to a consumer society, it can be viewed as a simpler way of life with just enough. As stuffocation reaches a saturation point, people are looking for ways to rationalize. Pairing back becomes the new priority, they are looking for ways to simplify and reduce on all levels. Lagom has no parallel English translation, and roughly means « just the right amount » or « just enough ». It stems from the idea ‘there is virtue in moderation’. Dating back to the Viking era, where communal eating and drinking was part of life, it has a strong community overtone, suggesting that one does not take too much, as greed can result in the hindrance of another. The concept isn’t about perfection, nor is it about frugality or denying oneself. It became apparent that women in general tend to over purchase cosmetics, trying new things or needing multiple options. Men, on the other hand, generally buy what they need – just enough for them. In recent years, Scandinavian countries have adopted this trend in to their design and lifestyles. Consumers are appreciating balance, simplicity and moderation. Lagom can be described as stripping off the fat but keeping the taste – which perfectly summarizes the Scandinavian ethos.
education investments as well. With a 13% share of its GDP allocated to education, the Caribbean island was in a dead heat with Lesotho atop the charts in relative education expenditures. Cuba was followed by Denmark and Ghana, with their annual education budgets equaling 8.7% and 8.1% of GDP, respectively. Looking at the 2010 CIA World Factbook report, we see that Denmark and Ghana have maintained their relative expenditures, as relative education budgets have remained unchanged in recent years. Cuba, meanwhile, only increased its expenditures on education by 0.2% despite its GDP growth by 1.3% in 2014, which indicates that education expenditure was not significantly altered and, in relative terms, actually had a slight relative decrement. All in all, large relative education expenditures in these countries indicates prospects for continued economic growth in the future, as GDP growth usually follows closely behind increases in the education level of the general populace. In 2012, public spending on education as a percentage of GDP in New Zealand was measured at 7.38%, according to the World Bank report, a significant increase from 5.3% registered just 4 years earlier. This positive trajectory has made the ‘Kiwi Island’ as one of the few well-developed economies nearing the top of this list. A good chunk of this growth has been allocated to economic development of the Maori and other aboriginal peoples of New Zealand, while also making increased efforts to educate all of the populace about the cultural and significant importance of these people, who have inhabited the land covered by the island nation since well before its absorption into the British Colonial Empire.”
While the U.S. spend more money on education than any other country, it spends less in terms of Gross Domestic Product (GDP). Investopedia reported that “The United States spends more money educating its young people than any other nation, according to a study from the Organization for Economic Cooperation and Development (OECD), which compiles educational data from nations across the globe each year. In 2010, the U.S. spent nearly $12,000 per student on elementary and secondary education, almost 40% more than the OECD average of $8,500. College spending, including technical schools and universities, was over $25,000, nearly double the average spending of other countries in the OECD. Total U.S. spending averaged $15,171 per student, slightly more than Switzerland’s $14,922 per year and 30% more than the average for all of the countries included in the OECD study. Several countries outspent the U.S. on elementary and secondary education, including Switzerland, Norway and Luxembourg, which spent $19,050 per full-time student in 2010. Switzerland came closest to U.S. spending on higher education, with total expenditures per student of nearly $22,000 per year. Sweden was next at $19,500 followed by Denmark and Norway, which spent $18,900 and $18,500 respectively. The U.S. also spent less of its total wealth on education than many of its counterparts. In terms of the percentage of the gross domestic product (GDP) spent on education, it trailed Denmark, Iceland, the Republic of Korea and Israel. Spending aside, students in the U.S. fare considerably worse than many of their counterparts across the globe in terms of knowledge gained. According to data from the Program for International Student Assessment, 15-year old in the U.S. ranked 31st on OECD standardized mathematics tests, and their test scores were far below average in reading and science. The U.S. was one of only five countries in the OECD to cut education funding in the two years prior to the OECD study. Education spending in the U.S. decreased 2% between 2008 and 2010, while spending in other nations was up 5%.”

Children first

The role of children in language development and expansion is crucial. It’s not because their role is to transmit a language as a whole to a new generation or replicate it, but rather to create a theory of language. They do so by innovating. Paying special attention to children’s literature across the globe would be necessary in accomplishing that goal. “Children’s literature is important because it enhances development of language skills and other critical thinking skills that provide the foundation of learning [...] Because reading children’s literature stimulates a child’s imagination, reading provides an important visual experience.” The new language would need to reflect children’s interests in different parts of our world. This effort would not aim at the emergence of a monocultural world – the proof is that people from different countries, although they may speak the same language, belong to different cultures – but would instill the required language skills to people at a very young age by using their built-in language instinct, which is more pronounced.
during the critical period (0 – 10 years). “Children’s Literature is defined as material written and produced for the information or entertainment of children and young adults. It includes all non-fiction, literary and artistic genres and physical formats.” Books are a good way to promote a language. Saying it's the perfect language-learning tool is not an overstatement. The focus on children to guarantee the expansion of a single and international native language is all the more important that “one of the most striking accomplishments of the preschool years is the child’s effortless development of speech and language. With respect to spoken language development, the preschool years represent a period of learning language. As children enter school, they are expected to use these newly developed language skills as tools for learning and increasingly for social negotiation. The important role of spoken and written communication in school-aged children’s lives suggests that individual differences in these skills may entail risks in terms of broader academic and psychosocial competence [...] Spoken language competence involves several systems. Children must master a system for representing the meaning of things in their world. Children must also acquire a facility with the forms of language, ranging from the sound structure of words to the grammatical structure of sentences. Additionally, this knowledge must be joined with their social competence. Mastery of these skills, which occurs during the preschool years, will allow the child to function as a successful listener and speaker in many communication contexts.”

Poverty is often the main culprit in the process of the primary socialization of children. Primary socialization is a crucial period in a life of child. It’s a period during which he/she learns to become a member of society. Nowadays, children are already connected and know how to work connected devices. However, in most parts of our world, children are either neglected or just don’t have the same opportunities that children living in industrialized countries have. Providing them with a decent start in life and a safe life is a requirement for a new language to expand for languages depend on children. The United States, though it’s the wealthiest country on Earth score very low in terms of economic welfare of children. In his article Child poverty in the U.S. is among the worst in the developed world, Christopher Ingraham writes: “The United States ranks near the bottom of the pack of wealthy nations on a measure of child poverty, according to a new report from UNICEF. Nearly one third of U.S. children live in households with an income below 60 percent of the national median income in 2008 - about $31,000 annually. In the richest nation in the world, one in three kids live in poverty. Let that sink in. With 32.2 percent of children living below this line, the U.S. ranks 36th out of the 41 wealthy countries included in the UNICEF report. By contrast, only 5.3 percent of Norwegian kids currently meet this definition of poverty. More alarmingly, the share of U.S. children living in poverty has actually increased by 2 percentage points since 2008. Overall, 24.2 million U.S. children were living in poverty in 2012, reflecting an increase of 1.7 million children since 2008.” “Of all newly poor children in the OECD and/or EU, about a third are in the United States,” according to the report. On the other hand, 18 countries were actually able to reduce their childhood poverty rates over the same period. The report finds
considerable differences in childhood poverty at the state level. New Mexico, where more than four in ten kids live in poverty, has the highest overall rate at 41.9 percent. In New Hampshire only one in eight kids lives in a poor household, the lowest rate in the nation. Poverty rates are generally higher in Southern states, and lower in New England and Northern Plains states.

While the United States can easily be singled out in terms of children poverty because it is considered as the wealthiest nation on Earth, the problematic prevails in every rich country in the world. According to UNICEF's 2017 report, "1 in 5 children in high-income countries lives in relative income poverty and an average of 1 in 8 faces food insecurity, according to the latest Report Card issued by the UNICEF Office of Research - Innocenti." The report considers how to end poverty, end hunger, ensure healthy lives, ensure quality education, and achieve gender equality among children. The results for these parameters are as follows:

- **End poverty:** On average 1 in 5 children in high-income countries lives in relative income poverty, though there is wide variation, from 1 in 10 in Denmark, Iceland and Norway to 1 in 3 in Israel and Romania.
- **End hunger:** An average of 1 in 8 children in high-income countries faces food insecurity, rising to 1 in 5 in the United Kingdom and the United States, and to 1 in 3 in Mexico and Turkey.
- **Ensure healthy lives:** Neonatal mortality has dramatically fallen in most countries; and rates of adolescent suicide, teenage births and drunkenness are declining. However, 1 in 4 adolescents reports two or more mental health issues more than once a week.
- **Ensure quality education:** Even in the best-performing countries, including Japan and Finland, around one fifth of 15-year-olds do not reach minimum proficiency levels in reading, mathematics and science.
- **Achieve gender equality:** On average, 14 per cent of adults surveyed in 17 rich countries believe that boys deserve preference for university education, and in the majority of these countries the belief is higher among males.

The table below shows the percentage of children living in households earning less than 60 percent of the median income both in the United States and other rich countries:
One in three U.S. children lives in poverty

% of children living in households earning less than 60 percent of the median income

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<th>Country</th>
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<td>Romania</td>
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Source: UNICEF
The situation of children in the developing world is even worst. According to a joint World Bank Group – UNICEF\textsuperscript{49} study, nearly 385 million children living in extreme poverty. Children are more than twice as likely as adults to live in extreme poverty, according to a new analysis from the World Bank Group and UNICEF. Ending Extreme Poverty: A Focus on Children finds that in 2013 19.5 per cent of children in developing countries were living in households that survived on an average of US$1.90 a day or less per person, compared to just 9.2 per cent of adults. Globally, almost 385 million children were living in extreme poverty. Children are disproportionately affected, as they make up around a third of the population studied, but half of the extreme poor. The youngest children are the most at risk – with more than one-fifth of children under the age of five in the developing world living in extremely poor households. “Children are not only more likely to be living in extreme poverty; the effects of poverty are most damaging to children. They are the worst off of the worst off – and the youngest children are the worst off of all, because the deprivations they suffer affect the development of their bodies and their minds,” said UNICEF Executive Director Anthony Lake. “It is shocking that half of all children in sub-Saharan Africa and one in five children in developing countries are growing up in extreme poverty. This not only limits their futures, it drags down their societies.” The global estimate of extreme child poverty is based on data from 89 countries, representing 83 per cent of the developing world’s population.

According to the study, UNICEF and the World Bank Group are calling on governments to:

- Routinely measure child poverty at the national and subnational level and focus on children in national poverty reduction plans as part of efforts to end extreme poverty by 2030.
- Strengthen child-sensitive social protection systems, including cash transfer programs that directly help poor families to pay for food, health care, education and other services that protect children from the impact of poverty and improve their chances of breaking the cycle in their own lives.
- Prioritize investments in education, health, clean water, sanitation and infrastructure that benefit the poorest children, as well as those that help prevent people from falling back into poverty after setbacks like droughts, disease or economic instability.
- Shape policy decisions so that economic growth benefits the poorest children.

Even though UNICEF and the World Bank Group are working with partners to interrupt cycles of poverty and to promote early childhood development - with programs ranging from cash transfers, to nutrition, healthcare and education. I think it’s imperative that civil society, the international community, and governments work together in order to eradicate extreme poverty among children worldwide. Although today children have a better chance to live to celebrate their fifth birthday,

\textsuperscript{49} UNICEF is an agency of the United Nations established in 1946 to help governments (especially in developing countries) improve the health and education of children and their mothers.
as opposed to a few decades ago, because they have more access to healthcare, it’s incumbent upon all of us to keep doing more. Educators, guardians, and parents alike must get involved. Our common goal must be the protection of children against austerity. National and local governments must join forces to achieve that. Furthermore, national budgets must reflect resource allocations to children. Cuts in military expenses and their reallocation to children’s needs could lead to savings of billions of dollars. Donors from consumer societies can contribute a lot to the welfare of children not only in their own societies but also worldwide. In that regards, UNICEF’s stand is as follows: “Donors, too, are duty-bound to keep their word to children in developing countries. Promises made to children at the Special Session, and enshrined in ‘A World Fit for Children’ cannot be forgotten. Pledges made following the Monterrey Consensus in 2002 to increase official development assistance by around $18.5 billion a year until 2006 must also be realized. The quality of aid also requires enhancement through improved harmonization of donor policies with recipients’ priorities. Investment in essential goods, services and infrastructure that directly satisfy children’s rights is crucial: without it, none of the other international development agendas will be realized.” UNICEF cites the following two cases as good examples:

- The Oportunidades program, launched in Mexico in 1997, grants cash transfers on the condition that members of a household are certified as attending school and health clinics. The results have been significant and consistent. Over the last five years the program has doubled its outreach and it is currently on target to pass the mark of serving 5 million families. In rural areas covered by the scheme, there has been a 57 per cent rise in visits to health clinics and significant reductions in under-five morbidity. School attendance and completion have also been boasted.

- In Madagascar, a comprehensive child survival program is helping to reduce infant mortality. The country has one of the highest rates of malnutrition in the world, but the root of the problem lies in causes other than a lack of food and includes poor feeding practices, malaria, diarrhea and other recurrent illnesses. The program includes activities to vaccinate every child, ensure that every mother and newborn is protected by insecticide-treated mosquito nets and to provide free oral rehydration packs. Mothers are encouraged to breastfeed their babies and counseled on how to improve nutrition and supplement their children’s diets with vitamin A. Schools are provided with latrines and safe drinking water, and health workers are trained on how to manage the treatment and prevention of childhood illnesses.

UNICEF put in place a deprivation index, which is a table with 14 points that can be used as indicators of how decent a child’s life is. The organization found that approximately 85% of the almost 85 million children (aged 1 to 16) in 29 European countries have at least 13 of the 14 items in the deprivation index and are therefore ‘not deprived’. Putting children in developing countries at the same level is a noble cause and must be envisioned by leaders of industrialized nations. Below are listed the 14 items in the index encompassing the ability of households to afford:
5. Recommendations

### Children First

<table>
<thead>
<tr>
<th>UNICEF Deprivation Index</th>
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<tr>
<td>1. Three meals a day</td>
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<td>2. At least one meal a day with meat, chicken or fish (or a vegetarian equivalent)</td>
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<td>3. Fresh fruit and vegetables every day</td>
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<td>4. Books suitable for the child’s age and knowledge level (not including schoolbooks)</td>
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<td>5. Outdoor leisure equipment (bicycle, roller-skates, etc.)</td>
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<td>6. Regular leisure activities (swimming, playing an instrument, participating in youth organizations etc.)</td>
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<tr>
<td>7. Indoor games (at least one per child, including educational baby toys, building blocks, board games, computer games etc.)</td>
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<tr>
<td>8. Money to participate in school trips and events</td>
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<td>9. A quiet place with enough room and light to do homework</td>
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<td>10. An Internet connection</td>
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<tr>
<td>11. Some new clothes (i.e. not all second-hand)</td>
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<td>12. Two pairs of properly fitting shoes (including at least one pair of all-weather shoes)</td>
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<tr>
<td>13. The opportunity, from time to time, to invite friends home to play and eat</td>
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<tr>
<td>14. The opportunity to celebrate special occasions such as birthdays, name days, religious events etc.</td>
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</tbody>
</table>

The work that UNICEF does probably cannot be nor will be matched by any single person, group, organization, or country. But, there is something we all can learn from that kind of effort: children are the most important people in a society. They are the ones who will relieve us. They are our future, the future of our species and our planet. Should a language emerge, naturally or artificially, they are the ones who can and will guarantee its expansion. Putting them first is the right thing to do. Their literacy, their safety, and their comfort must top the list of our priorities. UNICEF has devoted one page of one its website to the message: “For every child, results”, and I thought it would be relevant to quote it:

“UNICEF was established in the aftermath of World War II to help children whose lives and futures were at risk – no matter what country they were from.

The only thing that mattered to UNICEF was reaching children in need.

What mattered was achieving results.

The same holds true today. We work day-in and day-out, in some of the world’s toughest places, to reach the children who are most at risk and most in need. We work to save their lives and keep them safe from harm. We work to give them a childhood in which they’re loved, protected, healthy, educated and able to fulfil their potential.

That’s what UNICEF does. And we never give up.”
Implementation of a linguistic prescriptive approach – Following in “La Francophonie’s” footsteps could be beneficial

I showed earlier how language regulation may not be ideal to linguistic expansion, but on such a large scale, it would not hurt because there are just too many different languages spoken by too many different countries and regions around the world (see list of multilingual countries and regions above). Creating a focal point or a convergence point would be in order. After all, the language would have to be taught to children and students across the globe. Therefore, there must grammatical rules to follow in order to speak and write the new language properly. Although the term prescriptive is somewhat pejorative and authoritarian, it would be necessary to guarantee the preservation and the expansion of the new language. An important point to remember is that initially, speakers would attempt to speak it differently to reflect their regional traditions or their cultures, which would be, in this regard, counterproductive. Thus, a proscriptive approach, meaning an approach aiming at proscribing certain usages of the language, would also be in order. If a proscriptive approach is necessary, that makes a prescriptive approach relevant. The prescriptive grammar, along with other tools such as online corpora50, use of realia51, and digital platforms, would be at the heart of the effort to spread the new language and to motivate people to acquire it. That grammar could follow the example of the Port Royal Grammar (see Active initiatives aimed at the world’s linguistic unification above). Finally, the benefits of a prescriptive approach would result in the avoidance of indeterminacy, used in linguistics to refer to a state of affairs in linguistic study in which there is uncertainty on the part of a native-speaker, or disagreement between native-speakers, as to what is grammatical or acceptable; or in which there is uncertainty on the part of a linguist, or between several linguists, as to how and where a boundary line between different types of structure might best be drawn. In other words, the grammar should be adequate. The level of adequacy will show at three levels: 1) the grammar will be observationally adequate by presenting a corpus that includes well-formed sentences; 2) it will be descriptively adequate by taking the intuitions of native speakers into account; and 3) it will be explanatorily adequate by selecting the cream of the crop among universal principles.

Both the prescriptive approach and the absence of indeterminacy in the new language would result in an international native language that would be nuclear, meaning having a core system of structure and vocabulary for international use. The concept of a nuclear language is not new. Such an attempt was made by Randolph Quirk with his Comprehensive Grammar of the English Language, a descriptive grammar of English first published by Longman in 1985. In 1991, John Algeo called it “The greatest of contemporary grammars, because it is the most thorough and detailed we have,” and “It is a grammar that transcends national boundaries.” For David Crystal, “it was presented as a possible solution to problems of communication arising from the emergence

50 Corpora is the plural form of corpus, which is a set of documents used for a study, especially for a linguistic study.
51 Realia include objects and material from everyday life, especially when used as teaching aids.
of international varieties of English. Nuclear English would eliminate all features that were ‘dispensable’, in the sense that the language has an alternative means available for their expression (e.g. one of the two indirect object constructions, or the range of tag questions). A communicative nucleus would remain, which could be the focus for international purposes.” In other words, this model would be ideal and favorable to the teaching, learning, and the spread of the new single native language, which this book is about.

I think that an efficient way to resolve linguistic equivocation or ambiguity within nations, to promote and facilitate the spread of the new language (spontaneous or artificial) would be to rule that all international communications (agreements, arms deals, websites, book publications and other literary materials) be made in that new language. Make it a requirement that prestigious, famous, or international awards such as the Nobel Prize, the Booker Prize, the Academy Awards, the BAFTA Awards, the Palme d'Or, the Pulitzer Prize, the Golden Globes, The Grammys, the MTV Video Music Awards, and the BRIT Awards be awarded only to those who have produced their works in the new language. Speakers would eventually see it as an attempt to synthetize cultures around the globe instead of the other way around.

In the case of the French language, for example, the “Francophonie” movement, embodied by the Organization Internationale de la Francophonie (OIF), has for mission to preserve and to expand not the French culture but rather the French language. It’s a highly structured, diverse and well-funded organization. The following data were taken right off the organization’s website:

<table>
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<tr>
<th>THE EXAMPLE OF LA FRANCOPHONIE : THE INTERNATIONAL ORGANIZATION OF LA FRANCOPHONIE</th>
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<tr>
<td>ABOUT US</td>
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<tr>
<td>The International Organization of La Francophonie represents one of the biggest linguistic zones in the world. Its members share more than just a common language. They also share the humanist values promoted by the French language. The French language and its humanist values represent the two cornerstones on which the International Organization of La Francophonie is based.</td>
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<td>The International Organization of La Francophonie was created in 1970. Its mission is to embody the active solidarity between its 84-member states and governments (58 members and 26 observers), which together represent over one-third of the United Nations’ member states and account for a population of over 900 million people, including 274 million French speakers. IOF organizes political activities and actions of multilateral cooperation that benefit French-speaking populations. Its actions respect cultural and linguistic diversity and serve to promote the French language, peace and sustainable development.</td>
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<td>IOF has concluded 33 cooperation agreements with international and regional organizations and has established permanent dialogue between the major international linguistic zones (the English, Portuguese, Spanish, and Arab-speaking zones).</td>
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THE EXAMPLE OF LA FRANCOPHONIE: THE INTERNATIONAL ORGANIZATION OF LA FRANCOPHONIE

The IOF has its head office in Paris as well as four permanent representations in Addis Ababa (at the African Union and at the United Nations Economic Commission for Africa), in Brussels (at the European Union), in New York and in Geneva (at the UN). It has three regional offices (West Africa; Central Africa and Indian Ocean; Asia-Pacific) located respectively in Lomé (Togo), Libreville (Gabon) and Hanoi (Vietnam) and two regional antennas in Bucharest (Romania) and in Port-au-Prince (Haiti).

Alongside the IOF, the Parliamentary Assembly of La Francophonie and the four direct operators are responsible for implementing the programs decided at the Summits. The four direct operators are: The Academic Agency of La Francophonie, TV5Monde, the International Association of Francophone Mayors and The Senghor University of Alexandria.

58 Member States and Governments:
Albania, Principality of Andorra, Armenia, Kingdom of Belgium, French Community of Belgium, Benin, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Canada-New-Brunswick, Canada-Quebec, Cape Verde, Central African Republic, Chad, Comoros, Congo, , Cyprus, Democratic Republic of the Congo, Djibouti, Dominica, Egypt, Equatorial Guinea, France, Gabon, Ghana, Greece, Guinea, Guinea-Bissau, Haiti, Ivory Coast, Laos, Lebanon, Luxembourg, former Yugoslav Republic of Macedonia, Madagascar, Mali, Morocco, Mauritius, Mauritania, Moldova, Monaco, Niger, New-Caledonia, Qatar, Romania, Rwanda, Saint Lucia, São Tomé and Principe, Senegal, Seychelles, Switzerland, Togo, Tunisia, Vanuatu, Vietnam.

26 Observers:
Argentina, Austria, Bosnia and Herzegovina, Canada-Ontario, South Korea, Costa Rica, Croatia, Czech Republic, Dominican Republic, Estonia, Georgia, Hungary, Kosovo, Latvia, Lithuania, Mexico, Montenegro, Mozambique, Poland, Serbia, Slovakia, Slovenia, Thailand, Ukraine, United Arab Emirates, Uruguay.

Secretary General of La Francophonie: Michaëlle Jean
THE EXAMPLE OF LA FRANCOPHONIE: THE INTERNATIONAL ORGANIZATION OF LA FRANCOPHONIE

Administrator: Adama Ouane

BENCHMARKS

French language
- 274 million French speakers worldwide
- French is the 5th most widely spoken language on the planet
- French is the 5th most widely spoken language on the planet and the only one, together with English, to be spoken on all five continents.
- 3rd global business language
- French is the 2nd business language of the European Area and the 3rd global business language in the world
- 4th most widely used language on the Web

La Francophonie
- The IOF: 84 States and governments
- The International Organization of La Francophonie (IOF) has 84 States and governments (including 26 observers) across the five continents.
- IOF’s community: 1,5 billion people
- The IOF’s 84 States and governments account for a population of 1,5 billion people, which represents 16% of the world’s population
- The IOF: over one-third of the UNO’s member states
- The International Organization of La Francophonie’s 84-member states and governments represent over one-third of the United Nation’s member states.
- French is an official language in 32-member states
- French is either the official language, or one of the official languages in 32 of the IOF’s member states, governments or observers.
- The French-speaking zone accounts for 20% of world trade in goods
- 900,000 French teachers worldwide
- 125 million people study French
- It is the medium of instruction for a little over 76 million people and close to 49 million are learning French as a foreign language
- 60% of French speakers are under 30 years old
- In most of the IOF member countries, 60% of the population is under 30 years old.
- 55% of French-speakers live in Africa
- Africa is the continent with the largest number of French speakers
The following is an excerpt of *La Francophonie: History, Structure, Organization, and Philosophical Underpinnings*, by Moya K. Mason: “The French geographer, Onésime Reclus Reclus, first coined the term Francophonie in the nineteenth century. The term never really caught on until the 1960s when Léopold Senghor, first president of Senegal, used it consistently… The political leaders who emerged from decolonization in French Africa in the 1960s wanted to expand institutional and functional co-operation within the Francophone world. With their newly acquired freedom, independence, and equality, they wished to create new mechanisms of consultation, cooperation, and, whenever deemed appropriate, policy coordination at the political level. Such ideas were fostered by men like Léopold Senghor of Senegal, Hamani Diori of Niger, and Habib Bourguiba of Tunisia. Several African countries saw it as a way to expand their access to sources of development assistance, a mini-North-South dialogue (Canada 1988, 2) … La Francophonie as it is now known can be defined as the world community of French-speaking countries, or the collective unit formed by French-speaking people. In Francophonie: Purism at the International Level, Brian Weinstein describes it this way: *Francophonie is an international language movement led by government and nongovernment elites in over thirty countries where French is official or used by a significant population. The maintenance and extension of a standard spoken and written French language purified of unacceptable English language borrowings and local idiosyncrasies is one general goal. The other is the maintenance and extension of French as an official or co-official language (Weinstein 1989, 53) … Worldwide there are more than 150 million Francophones. Two of every three Francophones live outside of France, and in more than forty countries on five continents. La Francophonie "is a community, based on a common language, which believes in the unity and diversity of cultures" (Hamilton 1994, 21). It should come as no surprise that French has for some time been one of the most widely used languages in the world, and for a long time it was the only language of international diplomacy. It is used alongside English as a working language at the United Nations, the European Union and the Olympic Games. However, there is a great deal more to the Francophone community than simply sharing a common language… Leopold Sedar Senghor, the former president of Senegal, and one of the first leaders to push for summit meetings, said that French isn’t just a practical common language for use in administration and education. Senghor defined the French language as ‘a way of thinking and of action: a certain way of asking the question and of finding solutions thanks to a language which contains all the richness of centuries’ (Hamilton 1994, 21) … The French language is being used as a way to bring about a coming together, a sharing, and a collaboration that is strengthening those countries that have linguistic commonalties. As a result, people have an opportunity to come into contact with a huge array of cultural differences and diverse traditions, which fosters tolerance - something the world needs more of. As Staffan Zetterholm points out in the introduction of *National Cultures & European Integration: Cultural diversity implies different traditions for ‘doing things,’ ‘different socio-economic and political models and formulas for regulating different domains of public or social life such as industrial relations, the welfare system and the banking system. These traditions differ as to the degree of public vs. private involvement,*
centralization or decentralization and bureaucratization or emphasis of non-formal interpersonal ties. We often discuss the considerable difference between the French and British approach to administration, and the French formal legal tradition is contrasted with the more informal, pragmatic British approach...the greater the distance between the models of different countries and the more emotionally involved the populations are with their respective models, the more unlikely it is that a common policy on a supranational level can be established, accepted and implemented’ (Zetterholm 1994, 6-7).”

According to Abdou Diouff, ex-Secretary-General of the organization: “French language is our common property. As French speakers, we do not only share its use, we also share the responsibility for its development and dissemination. As can be seen in this new edition of The French Language worldwide, French includes a widening circle of speakers but whose center is gradually more rooted in Africa. So, Africans will be deciding the future of the Francophone world. African countries are increasingly in a headlong race that must reconcile population growth and providing quality education, endogenous sustainable development and greater international trade liberalization, robust home-grown cultural expression and intercultural dialogue. For French speakers and their leaders, but also for us, leaders of the institutional ‘Francophonie’. This begs the following question: can French be an engine that makes it possible to win this race? ... In this regard, French remains one of the most reliable seedbeds of cultural and linguistic diversity that must be recognized and promoted to ensure an inclusive dialogue between men and women, between traditions and cultures and different types of human societies. To paraphrase Dr. Schweitzer who said that love is the only thing that is doubled when shared, one could say that by sharing the French language humanism is strengthened and an opportunity provided to breathe life into fraternity.”

It is important to note that the example set by the International Organization of la Francophonie is commendable and worth to be followed because it shows how it is possible for many cultures and people from all walks of life to come together as one in the name of a language and its expansion. In its early stage, the universal language may not have a scope similar to that of La Francophonie, but thanks to an aggressive linguistic campaign, the overseeing entity could very achieve the same goals. The key is to have speakers become aware of what they can accomplish thanks to a common language. If language can divide nations, it can also unite them; and I think that the forces that language uses to unite people are stronger than the ones that divide. When people fight to become separate because they don’t have the same language, the only thing that may be accomplished is the division itself. No other positive outcome may surface afterwards. Whereas when people join forces together to become unite in the name of one language, the benefits are limitless. That is what I perceive in the International organization of Francophonie’s mission, and I am convinced that applying the same concept to the universal native language can only bring positive results after just a few decades.
Technology, networking, and interface enhancement

Being connected is crucial to any type of learning nowadays. It would be even more so in the event the world shows some real interest in the development of a common native language. Making the Internet accessible to virtually all human beings must be considered in case we become serious about adopting a single language. People around the world must be allowed to access the Internet willingly if they can afford it, without being restricted or intimidated by authorities. For example, in Cuba, although, as a developing country, 31.1% of the population have Internet, which is considerable, according to CIA’s estimate for July 2015, “private citizens are prohibited from buying computers or accessing the Internet without special authorization; foreigners may access the Internet in large hotels but are subject to firewalls; some Cubans buy illegal passwords on the black market or take advantage of public outlets to access limited email and the government-controlled ‘intranet.’”

According to a study led by the United Nations, 47 percent of the world’s population used the Internet as of 2015. “Contrasting from country to country, the disparity in Internet users can be especially stark. Iceland had the highest levels of Internet use, with 98.2 percent, followed closely by a number of northern European nations such as Luxembourg (97.3 percent), Norway (96.8 percent) and Denmark (96.3 percent). But in some countries, Internet users were a tiny fraction of the population. Just 2.2 percent of Niger’s citizens are Internet users, the report estimated, followed by Chad (2.7 percent), Guinea-Bissau (3.5 percent) and Congo (3.8 percent). The ITU was unable to estimate Internet users in some countries, including the restrictive regimes of North Korea and Eritrea […]”

There are now 3.9 billion people in the world who do not use the Internet, the study found, and in addition to being poorer, they tend to be disproportionately less educated, rural, elderly and female. The report suggested that ‘broader socio-economic factors’ – in particular education levels – may need to be addressed if the United Nations wants to reach its target of having 60 percent of the world’s population online by 2020.”

Such unleveled accessibilities when it comes to the Internet may turn out to be a huge snag for the expansion of the new language. Special consideration must be given to this special communication
tool without which the world wouldn’t be what it is today. The idea of incorporating technology
in learning is called digital literacy, which is the ability to use information and communication
technologies to find, evaluate, create, and communicate information, requiring both cognitive and
technical skills. According to Educause, digital literacy enables students to do the following:

- **Find and vet information online.** In the digital world, being able to not only find
  information online but also determine its quality and validity is crucial.
- **See problems from digital perspectives.** Students need to be able to analyze a problem and
determine how to use digital tools to solve it. For example, can a problem be solved more
quickly by creating a spreadsheet or by working the problem manually?
- **Become self-directed learners.** The Internet has put all of the world’s knowledge at our
fingertips. Students should know how to take advantage of that availability of information
to become lifelong learners.
- **Obtain digital solutions.** Technology is constantly changing. Students must learn how to
evaluate and buy the right digital tools to solve the problem at hand, rather than just relying
on the tools they have used in the past.
- **Learn software quickly.** Software is also always changing and improving, so students need
to be able to quickly teach themselves new tools. For example, whereas being an expert in
spreadsheets was an important quantitative skill set in the past, now it is increasingly
important to be an expert in visualization tools such as Tableau.
- **Design and create digital solutions.** Ultimately students should build a skill set that allows
them to develop or customize their own digital tools. This does not necessarily mean that
students need to be able to write their own applications from scratch. Rather, they should
be comfortable customizing and combining tools to create a complete solution—for
example, creating a web-form to automate the collection of customer evaluations and then
outputting the results to a spreadsheet for analysis.

Digital literacy differs from the traditional literacy in terms of its approach to information and in
that it’s dynamic and empowers the student. The table below shows the basic differences between
digital and traditional literacies:
As part of the technological enhancement, the perfection of current technologies such as computational linguistics is not to be overlooked. Computational linguistics is the branch of linguistics in which the techniques of computer science are applied to the analysis and synthesis of language and speech. In other words, it focuses on computational methods to answer the scientific questions of linguistics, or to design linguistic representations and formal grammar. Experts in computational linguistics study the mathematical properties of these representations and grammars, and devise efficient algorithms for learning, production, and comprehension. Because the algorithms can actually run, they test their models and find out whether they make appropriate predictions. This key property would be helpful in the prevision, the processus, and the potential expansion of the new language. The appropriateness and importance of computational linguistics is summed up in this excerpt from Stanford Encyclopedia of Philosophy: “Computational linguistics is the scientific and engineering discipline concerned with understanding written and spoken language from a computational perspective, and building artifacts that usefully process and produce language, either in bulk or in a dialogue setting. To the extent that language is a mirror of mind, a computational understanding of language also provides insight into thinking and intelligence. And since language is our most natural and most versatile means of communication, linguistically competent computers would greatly facilitate our interaction with machines and software of all sorts, and put at our fingertips, in ways that truly meet our needs, the vast textual and other resources of the internet.” Examples and applications of computational linguistics include but are not limited to:

1. Machine translation
2. Document retrieval and clustering applications
3. Knowledge extraction and summarization
4. Sentiment analysis
5. Chatbots and companionable dialogue agents
6. Virtual worlds, games, and interactive fiction
7. Natural language user interfaces, which include Text-based question answering, Database front-ends, Inferential (knowledge-based) question answering, and Voice-based web services and assistants
8. Collaborative problem solvers and intelligent tutors
9. Language-enabled robots

Finally, the optimization of the use of artificial intelligence such as connectionism must be considered as well. Connectionism is “an application in linguistics of a computational framework for modelling cognitive functions, based on numerical computation rather than symbol manipulation. A connectionist network (or neural network) is a device which models the kinds of structures and processes thought to operate in the brain: the processing units in the network are called ‘neurons’ (in an abstract sense) or ‘nodes’, each being excited or inhibited (according to certain numerical formulae) by information obtained from the other units to which it is connected. The pattern of neuronal activity represents the data being processed by the network.”

View the whole effort as an international social movement

The emergence of a single and universal native language – be it the result of active initiatives or passive initiatives – is likely to affect humans on a large scale in terms of numbers of speakers and culture. Although it would not end cultural diversities in the immediate term, it must be viewed as a social or a cultural movement. As such, the golden rule to follow would be to treat that potential international monolingualism as we would any social movement. In other words, to make it happen, we would need to envision and successfully go through the same process social movements do.

First, what is a social movement? According to Karl-Dieter Opp, there is no single consensus definition of a social movement. Mario Diani, on the other hand, argues that nearly all definitions share three criteria: "a network of informal interactions between a plurality of individuals, groups and/or organizations, engaged in a political or cultural conflict, on the basis of a shared collective identity. For Charles Tilly, social movements are a major vehicle for ordinary people's participation in public politics. He argues that there are three major elements to a social movement: 1) Campaigns: a sustained, organized public effort making collective claims of target authorities; 2) Repertoire (repertoire of contention): employment of combinations from among the following forms of political action: creation of special-purpose associations and coalitions, public meetings,
solemn processions, vigils, rallies, demonstrations, petition drives, statements to and in public media, and pamphleteering; and 3) WUNC displays\(^{52}\): participants’ concerted public representation of worthiness, unity, numbers, and commitments on the part of themselves and/or their constituencies. Sidney Tarrow defines a social movement as collective challenges [to elites, authorities, other groups or cultural codes] by people with common purposes and solidarity in sustained interactions with elites, opponents and authorities. He specifically distinguishes social movements from political parties and advocacy groups. The sociologists John McCarthy and Mayer Zald define as social movement as a set of opinions and beliefs in a population which represents preferences for changing some elements of the social structure and/or reward distribution of a society. According to Paul van Seeters and Paul James defining a social movement entails a few minimal conditions of ‘coming together’: 1) the formation of some kind of collective identity; 2) the development of a shared normative orientation; 3) the sharing of a concern for change of the status quo and 4) the occurrence of moments of practical action that are at least subjectively connected together across time addressing this concern for change. Thus, we define a social movement as a form of political association between persons who have at least a minimal sense of themselves as connected to others in common purpose and who come together across an extended period of time to effect social change in the name of that purpose.

If there is something these definitions have in common, it’s the fact that they all fit into the required process the emergence of a single native language must go through before coming to fruition. The processes include everything that I have discussed so far, going from the mechanism and the dynamism of language acquisition to the initiatives (active and passive) aiming at unifying our world linguistically and the barriers encountered in doing so. Therefore, this last recommendation (assimilation to a social movement) is of utmost importance for when approached as a social movement, the outcome of the potential, unique, and global native language may be of four types. From the most desirable to the least desirable, we have the following:

- **Full response:** would be achieved if the global native language is recognized as legitimate, achieves its goals, and is legalized (realization of a collective dream and aspiration; language barriers are finally broken; every country has one official and native language; emergence of monolingualism in its purest form).
- **Pre-emption:** would be achieved if the language experiences bittersweet victories, meaning it might be recognized, or realize its goals but is not accepted as a legitimate endeavor or is not as a welcomed movement, due to a mix of such factors as culture – as we saw above (the underlying good intention of the effort is internationally recognized; a large number of people decide to adopt the language individually instead of officially).

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\(^{52}\) WUNC stands for: Worthiness, Unity, Numbers, and Commitment on the part of demonstrators or activists.
5. Recommendations

View the Whole Effort as an International Social Movement

- **Co-optation**: would occur if the language wins some recognition, but does not actually meet its goals and isn’t legalized (a limited number of people around the world acknowledge the importance of the effort, but there aren’t enough speakers; politicization of the effort; economic barriers; concrete steps are limited to industrialized countries with significant technological and communication means while the rest of the world lags behind).

- **Collapse**: would occur if the language fails to win recognition, achieve its goals, and to be legalized, and simply collapses (total fiasco, lack of interest, too much bureaucracy).

In the light of this brief analysis of social movement, we can clearly predict that for the new language to become institutionalized, speakers will need more than just volition. They will need a new mindset, like the one popularized by the International organization of Francophonie. The expansion of the universal language will need to be based on collective behaviors that are coherent, worldwide cohesion among speakers, and the acceptance from the latter of the fact that it represents hope and a bright future in which humans will be able to work out their differences and set good examples for their children. Then and only then, will it succeed as a social movement.

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6. LIMITS OF A POTENTIAL UNIVERSAL NATIVE LANGUAGE

The last three of the above four outcomes may be the results of powerful barriers (see discussion of barriers), but, imagine for a second that the movement actually obtains a full international response and is materialized. Would that be, from then on, a cause for celebration? Would there be total or partial satisfaction? As it is the case for everything else, Man’s inventions are never perfect since Man himself isn’t perfect. A global native language wouldn’t be exempt from that rule. It would still face tremendous challenges because, by and large, language evolves, as Mankind and the environment are not static. Humanity must evolve at a rate equal to that of the environment just to keep up or else it will face extinction. Languages, on their part, also evolve as fast as Humanity. As a rule of thumb, languages that fail to do so become dead or extinct. Therefore, although the new language might be somehow stable at first, both environmental and linguistic changes would catch up with it very rapidly, and this dynamic would create a recurrent spacetime vicious cycle. Among the most notable limits, I would like to cite the following:

- A universal language would still be unable to suppress deficit hypothesis in children. “Linguistic deficit hypothesis is the name given to the view that some children, especially those belonging to an ethnic minority or with a working-class background, lack a sufficiently wide range of grammatical constructions and vocabulary to be able to express complex ideas, such as those needed for success in school.” This is because the universal native language wouldn’t be likely to resolve economic inequalities. Its focus would be rather linguistic equality or uniformity.

- Speakers’ vocabularies would still be diverse because the choice of words and idioms are normally left to the speakers’ discretion. People’s lexicons vary from one person to the next. For example, there is a difference between active and passive vocabularies. Lexicon is the vocabulary of a language. Every speaker of a language possesses a certain type of vocabulary, and this may be divided into his/her active vocabulary, the words which he uses himself, and his passive vocabulary, the words which he understands but does not normally use.

- Ideas would still be expressed in different ways. Onomatopoeias\(^\text{53}\) and interjections\(^\text{54}\) would remain the same. The following are examples of English translations of French Onomatopoeias and interjections:

\[^{53}\text{Onomatopoeia is the formation or use of words such as buzz or murmur that imitate the sounds associated with the objects or actions they refer to.}\]

\[^{54}\text{An interjection is a word used in a sentence as an independent element, grammatically unrelated to the other words.}\]
6. Limits of a Potential Universal Native Language

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aïe! Ouille!</td>
<td>Ouch!</td>
</tr>
<tr>
<td>Zut!</td>
<td>Damn!</td>
</tr>
<tr>
<td>Hein?</td>
<td>Huh?</td>
</tr>
<tr>
<td>Ouf!</td>
<td>Phew!</td>
</tr>
<tr>
<td>Miam-miam!</td>
<td>Yummy!</td>
</tr>
<tr>
<td>Coucou!</td>
<td>Hello! Or Peekaboo!</td>
</tr>
<tr>
<td>Berk! or Beurk!</td>
<td>Yuk! or Yuck!</td>
</tr>
<tr>
<td>Bof!</td>
<td>Hmmm! (I don’t know. Not so good)</td>
</tr>
<tr>
<td>Boum boum!</td>
<td>Bang bang!</td>
</tr>
<tr>
<td>Oh là là!</td>
<td>Wow!</td>
</tr>
<tr>
<td>Plouf!</td>
<td>Splash!</td>
</tr>
<tr>
<td>Tac tac! or Toc! toc!</td>
<td>Knock knock!</td>
</tr>
<tr>
<td>Vlan! or V’lan!</td>
<td>Whack! Thwack! Slap!</td>
</tr>
</tbody>
</table>

On the other hand, the interpretation of animal sounds varies from country to country. As the saying goes: “The rooster crows differently depending on where it lives” For example, the sounds produced by the following animals are interpreted differently around the globe, but to keep it simple, let’s look at the English translations of how the French express animal sounds:

<table>
<thead>
<tr>
<th>Animal</th>
<th>French (English pronunciation)</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>Ouah! Ouah (wah! wah!)</td>
<td>Woof! Woof!</td>
</tr>
<tr>
<td>Cat</td>
<td>Miaou! (meaahoo!)</td>
<td>Meow!</td>
</tr>
<tr>
<td>Rooster</td>
<td>Cocorico! (kokoreeko!)</td>
<td>Cockadoodledoo!</td>
</tr>
<tr>
<td>Turkey</td>
<td>Glou! Glou! (glool! glool!)</td>
<td>Gobble! Gobble!</td>
</tr>
<tr>
<td>Cow</td>
<td>Meuh! (myrrh!)</td>
<td>Moo!</td>
</tr>
<tr>
<td>Bird</td>
<td>Cui! Cui! (kwee! Kwee!)</td>
<td>Tweet! Tweet!</td>
</tr>
<tr>
<td>Duck</td>
<td>Coin! Coin! (kwan! kwan!)</td>
<td>Quack! Quack!</td>
</tr>
<tr>
<td>Pig</td>
<td>Groin! Groin! (grwan! grwan!)</td>
<td>Oink! Oink!</td>
</tr>
<tr>
<td>Donkey</td>
<td>Hi – Han! (ee-an!)</td>
<td>Hee – Haw!</td>
</tr>
</tbody>
</table>

- Most of the time, proverbs and idioms – which are ideas – are also expressed differently according to cultures, and would likely not change even in the case of a common native language. For example, the idea that something may never happen, even in a million years, is translated by different representations in English, French, Russian, and Dutch to name a few. In English, people say: “When pigs fly” In French, the same idea is conveyed by the phrase, “When hens have teeth (quand les poules auront des dents)”. In Russian, it’s the intriguing phrase, “When a lobster whistles on top of a mountain (Когда рак на горе свистнет)”. And in Dutch, it’s “When the cows are dancing on the ice (Als de koeien op het ijs dansen).” English being essentially a West Germanic language, one would think that
the word “gift” – that also exists in German with same pronunciation and spelling – would mean the same thing. But no, the Germans choose to mean it as “poison” (or the British chose to mean it as “present”, depending on who you choose to blame). A second example is “actually”, which means really, but, if translated word for word in French, will give “actuellement”, which means presently or currently in English. Here is a third one you might like: “preservative” in English means a substance used to preserve foodstuffs, wood, or other materials against decay. Be careful not to use the French word “préservatif” to mean the same thing for it’s the equivalent of “condom” in English. *Preservative* is translated into *agent de conservation* in French, literally “conserving agent”. These three examples illustrate what is called, in linguistics, *false friends* or *faux amis*, which are words in two languages that look or sound similar, but differ significantly in meaning. It wouldn’t be long before the creation and use of false friends become the norm from one region to another even in the case of a global native language.

- Normally, societies and cultures tend to set their own preferences when it comes to languages, and these preferences lead inevitably to language change. An example is the above-mentioned Britain’s received pronunciation, which has however considerably declined nowadays. The new language might eventually meet the same fate. Even if a received pronunciation is put in place, it wouldn’t be able to last over time because generations tend to speak one differently from the next according to the new trends, customs, and lifestyles in place. Humans are acutely responsive to lifestyles. “The annual Christmas address made by Elizabeth II, since 1952, to citizens of the Commonwealth – fifty-four member-states that are mostly former territories of the British empire – has been studied by researchers at MacQuarie University in Australia. It was found that significant changes have taken place in the Queen’s accent, in common with the language spoken by her subjects since this time. The Received Pronunciation (RP) spoken by the Queen today is no longer the same as in the 1950’s. In common with speakers of RP at large, sometimes referred to as BBC or Oxford English, the Queen’s accent today demonstrates an incorporation of some features of Britain’s southern Estuary English. For example, in the Queen’s broadcasts from the 1950’s, the word *had* almost rhymed with *bed*. But thirty years later, *had* had migrated much closer towards the standard southern English pronunciation, which rhymes with *bad*.” Evans (2014). “Language change is produced by similar principles to those that give rise to biological diversity, as seen across evolutionary time. And we can better understand how language evolves by drawing on neo-Darwinian evolutionary theory.” Croft (2000).

- Cultural barriers would remain because language is just one element of culture. It’s a value. Culture also includes ideas and norms, which, along with values form a set of behaviors and thinking pattern displayed by a specific group of people; and ideas and norms vary
from nations to nations although they may share the same language. For example, Americans are not British, who don’t even consider themselves as Europeans; French (from continental France, also called Metropolitan or European France) are different from French Canadians, who, I think, are rather inherently North Americans with a slight touch of French culture; Brazilians and Portuguese are different, Spain, Mexico, and the remaining Central and South Americas have cultures that are totally different from one another. Even though language is generally seen as the most significant cultural barrier, its universality would still leave other barriers intact, such as “differing practices as related to medical procedures, and different conceptions of gender and sexuality. These barriers can lead to serious miscommunications between parties with differing cultural backgrounds… Customs in cuisine differ between social groups and can often be a cause for concern. Animals kept as pets in one culture might be used as a source of food in another. Some cultures employ dogs and horses in this manner, a practice viewed as normal in most of the world and as distasteful in parts of the Western world. Like many barriers this can cause enmity and tension…Religious groups like the Christian Scientists have strictures and other religious laws against accepting blood transfusions and related procedures. This can cause extreme friction between members of the faith, most members of the medical profession and family members outside of the church.”

• A universal native language would not necessarily lead to a universal sign language for the deaf because sign languages are not tied to any spoken native or local languages albeit there is a relationship of sorts between them. I spoke earlier about the basic properties of language, which are: shape property (letters for written communications), acoustic property (sounds for spoken communications), and movements (signs, well for sign language). Sign languages are not representations of spoken languages. Currently, there are close to 150 sign languages, among which the American, Australian, British, New Zealand sign languages used for mostly English-speaking countries. In Brazil, they have LIBRAS (Língua brasileira de sinais) or Brazilian sign language), used by the majority of the deaf of Brazilian urban centers. These sign languages would not disappear or fuse because of the emergence of a universal native language. Sign languages don’t share the same characteristics as spoken languages. There is no such thing as accent or critical period (a period deemed the best when it comes to learn and master it, as it is the case in spoken language).

• Precisely because there are thousands of cultures in the world, the new language might find itself at a lack of words for certain norms and values. I came across a post by Dr. Joe
Wenke\textsuperscript{55} that I think summarizes very well that deficiency: “I’m very upset that the English language does not allow me to accurately describe myself in some very important ways. When I say ‘important,’ I mean it — as in how I think and what my sexual orientation and gender identity are...What about my sexual orientation? Well, I’m most strongly attracted to transgender women. I am certainly not straight, but I’m not gay, either. So, what’s my sexual orientation? There is no word that describes a person who is primarily attracted to transgender women. There’s also no word that describes a person who is primarily attracted to transgender men. According to the English language, these sexual orientations don’t exist. Maybe I should call myself ‘trisexual,’ which suggests that I’m attracted to the ‘third gender.’ In fact, that is what I’ve been calling myself, but I’m not totally happy with the term. First of all, it’s been used to describe somebody who will try anything sexually. That describes me, too, but it’s not a sexual orientation. It’s openness to adventure and experimentation. Secondly, I don’t like the idea of assigning numbers to gender, which brings me to my next point...There is also no word to describe people who are neither men nor women either from a cisgender or transgender standpoint. The term ‘genderqueer’ just poses the issue. It basically says, ‘I don’t accept gender categories.’ Right. But wouldn’t it be wonderful if there were words to describe all of the subtle variations of gender identity? ‘Androgynous’ is OK, but, again, it simply acknowledges the world of gender diversity...I really don’t know how to refer to my gender identity. A few days ago, I was waiting in line at a Starbucks. I was about 10 feet away from the guy (he was a guy) behind the counter. He looked at me and said, ‘You’re next, ma’am.’ When I walked over to him, he said, ‘What would you like, sir?’ Maybe that is the best I can expect...The truth is that language reflects cultural values, or perhaps I should say ‘cultural biases.’ The term ‘atheist’ is a negative value judgment. The lack of any word to describe sexual attraction to transgender people represents a refusal to grant integrity to transgender people or even to acknowledge that they exist. The binary definition of gender carries with it the judgment of the culture against people whose gender identity trumps biology...The limitations of language may leave us speechless, but we should remain so only for a moment. We must use the words that we do have to speak out in favor of freedom of thought and being. We must not only be who we are. We must tell the world who we are as well.”\textsuperscript{56} Wenke (2012)

\textsuperscript{55} Joseph (Joe) Wenke is a writer, critic and LGBTQ activist. He is the founder and publisher of Trans Uber, a publishing company with a focus on promoting LGBTQ rights, free thought and equality for all people.

\textsuperscript{56} To clarify some of Mr. Wenke's doubts and apprehensions, I would like to emphasize that the concept of sexual orientation is a modern concept. For example, in Antiquity (and even until a later period of our era), the term sexual orientation did not exist. Only gender existed. Humans and languages were still at a dead end: finding terms to qualify the sexual preferences of individuals. In ancient Greece, for example, sexual preferences could be summed up in two categories: active penetrators and passive penetrated. Active penetrators were males. Passive penetrated were both males and females. Some active penetrators would engage in sexual activities involving both male and female adults, but also boys. The term pederasty meant (and still refers today as) any sexual act involving an adult male and a boy. I would like to reiterate the fact that languages and cultures are constantly changing. If Mr. Wenke
• Poverty would still be there and prevail in most countries. Even the status of the new language as the universal language of science wouldn’t keep science itself from being impacted by global poverty. The global scientific community would still be divided, like Montgomery (2013) puts it: “into three domains: (1) countries wealthy enough to support all fields of science and engineering, or a large selection of them; (2) nations whose research capability is growing fast, but who must still select which fields to fully encourage; and (3) poorer nations able to support only a few fields.”

• Finally, a global native language would not eradicate other major issues which are threats to the world’s security, as they currently exist in regions where people speak common native languages. Those global security issues include, but are not limited to:

  o Unstable governments
  o Overpopulation
  o Famine
  o Shortage of water
  o Terrorism
  o Human trafficking
  o Child labor and child pornography
  o Organized crime and violence
  o Environmental issues
  o Border insecurity
  o Etc.

sounds disappointed, what about the first speakers of the universal language for whom the period of adjustment and adaptation would be similarly long?
These limits would be unavoidable, but still the language would be global. However, it’s important to remember that although the number of languages can be narrowed down, the idea of our world having a single, pure and universal language with no other dialects may be a utopia for now especially a constructed language that would result from an international consensus. Mankind is too individualistic. That individualism is reflected by culture. This is to say that we would have to rely on the environment, meaning wait for all languages to fuse over the centuries or millennia. Languages and the environment are inextricably linked and are equally dynamic. Biologically, every species is subject to adaptation to the environment – most of the time not by choice –, and once that adaptation is expressed by the possibility of survival or extinction, its genome mutates and develops the proper genes suitable for its survival. Applied to linguistics, we can assume that if the survival of Mankind came to depend on speaking only one language across the planet, we’ll probably have to first develop the genes that allow us to learn effortlessly more than one language way into our adult lives just like we do now between 0 – 10 years old, before reaching puberty. It would take a great deal of incentive and motivation for the world population to come together as one, linguistically speaking. We saw how any attempt to impose a language to everybody would be perceived as a dogma and, thus, would be a failure. A universal language may not be a dogma nor imposed on any nation. History and experience teach us that whenever an idea or an ideology becomes a dogma, the latter always begets heretics who oppose to the established norms. The emergence of a single and universal (artificial) language must first be linked to utilitarianism, meaning be perceived as something that could benefit most of Mankind, in other words something that justifies the pursuit of the greatest good for the greatest number of people. Even in the best-case scenario, on a spacetime level, first, it would take a very long time for such an initiative to materialize and be democratized. On the other hand, the universal language would forcibly be influenced by several socio-political and economic factors and, in the process, become a recipient language instead of a dominant language. Recipient because the new language, instead of being universally accepted, might end up loaning words from existing languages. The reverse is also true. Either way, they would interact with each other like languages normally do, as we’ve seen earlier in the case of language contact. This is a common phenomenon in historical linguistics and it can help shed light on the potential emergence of a single native language. The new language would have a better chance to work if it emerges naturally rather than artificially. People tend to see constructed languages (or the idea thereof) as lacking originality. The latency of both Esperanto and Interlingua may attest to that. Esperanto, for example, is still not the official language of any country and is spoken only by only 100,000 to 2 million people worldwide after 130 years. Instead, current major languages need to simplify their grammars and their vocabularies to make them easier for people to learn, as in the case of the above-mentioned Port Royal Grammar as part of the active initiatives taken by previous authors, visionaries, and linguists alike to unify our world linguistically.
Formal and strict regulations of languages are not helpful to the emergence of a single language. While a new language would still need some regulations, the latter would rather focus on how to help expand the new language more rapidly and more efficiently. I demonstrated how language regulation isn’t necessary, by taking English as an example. As opposed to French and Spanish, English is not regulated and is not even the official language – well, explicitly – of the United States, which has none. I explained how difficult it is for a language to remain original especially when moved over long distances. Applied to the new language, the latter would quickly lead to a phenomenon known as dialect continuum, meaning a chain of dialects spoken throughout an area; also called a dialect chain. At any point in the chain, speakers of a dialect can understand the speakers of other dialects who live adjacent to them; but people who live further away may be difficult or impossible to understand. For example, an extensive continuum links the modern dialects of German and Dutch, running from Belgium through the Netherlands, Germany, and Austria to Switzerland. But German speaking minorities who live in Poland, Hungary, Czech Republic, and Romania may find it difficult, even impossible, to understand each other.

I hypothesized that a universal language might emerge either from a constructed language by an international consensus in order to eliminate linguistic competition within our own species (intraspecific linguistic competition) or as a result of the natural course of the environment, to which nothing nor nobody can escape, in which case we would go back to that era when all humans spoke a common language. I also hypothesized that a universal language might emerge from what I call an “interspecific linguistic competition” – linguistic competition between humans and one or more non-human species – prompted by the development of language ability by animals. In my analysis, I brought to light the relationship that exists between animal communications and human language, which is an indicator that any animal species might develop language ability sooner rather than later, much to our surprise. I supported my animal linguistic evolution hypothesis by taking natural selection as example, according to which animal might be able to reproduce any change affecting the gene(s) responsible for their communication systems and spread that mutation through migration, like humans did when our speech ability was in its infancy. Amid a single global native language and the existence of other languages spoken by animals, the notion of multilingualism may never become outdated. Perhaps humans will still be proud to say that they are multilingual because, besides the human language, which would be the universal native language, they also speak one or more animal languages. The little boy at the park whom I referred to might skip asking his grandma if the squirrel can talk and decide instead to interact directly with the intriguing animal.

I think that my hypotheses (the emergence of an internationally constructed language in the absence of interspecific linguistic competition, the emergence of a naturally-occurring international language resulting from reversing trends, and the emergence of an internationally constructed language because of interspecific linguistic competition) are plausible when I hold them up to the dynamics of the environment. To the potential dissenting voices, I say this: the
multilingualism that today prevails in the world is nothing but the culmination of an intraspecific linguistic competition – that is, a linguistic competition within our own species – which I explained by taking for example the breakup of Latin into the Romance languages. In that regard, I showed how French, Italian, Spanish, Portuguese, and Romania had emerged because of pure regionalism and national pride. I do not want to sound defeatist, but I would like to remind my readers that anything that is acquired can also be lost. Therefore, it is possible that humans become deprived of their language ability somewhere along the line because of genetic mutation(s), the same way we acquired language because of a genetic mutation of the gene FOXP2, as discussed above. But because I would like at least one of my hypotheses to materialize, I want to assume that the relationship we have had with language ever since it emerged 60,000 years ago, will keep thriving and will always be on the positive side, a sine qua non condition for a universal and global native language to emerge, the same way it emerged in a small corner of Africa, which makes the concept of a global native language a multimillennial one because, as a species, we have already experienced what it is for every human to speak the same language. We did it before, on a small scale, of course. We can do it again, this time around on a much bigger scale by reversing the trends. The significance of this book lies within the fact that it brings to bear issues that the linguistically disinterested generally don’t pay attention to when they are precisely the people who contribute to language use, its change, and its evolution. The arguments that I have made utilizes results of tests, studies, or research conducted by scholars, agencies, and universities alike, and offers a detailed linguistic awareness campaign plan and strategy, which could turn out to be a seminal tool in the quest for linguistic unification of our multilingual world. The list of multilingual countries and regions of our world that I have included in this book can only elicit amazement. Most of us had no idea our world was so linguistically diverse before reading that list. On the other hand, the recommendations that I have suggested are practical and can be put to use in an immediate future or in the long-term, as they are and will always be compatible with the dynamics of the environment. However, I reckon that a global native language would have its limits and would not be a panacea to major global security threats. I listed, at the end of my discussion, some of those of threats, such as unstable governments, organized crime and violence, human trafficking, and so on. Those are either political, environmental, or ethical issues and are way beyond linguistics’ realm. Thanks to the arguments, tools and evidence that I have presented, the current global linguistic reverse trend can be understood by the person with no language training, which is important because the target audience or those who will guarantee the expansion of the new language will not necessarily be linguists, but certainly people from all walks of life.

That reverse trend can be summed up as follows: if spoken language was born in Africa and spread out of Africa thanks to migration, the reverse trend has begun, and that, several centuries ago. New natural languages have not been emerging. They have in fact long reached a plateau and have been decreasing for a while now. Natural languages, as I explained, are being either extinct or are endangered. It may not happen in a near future, but a universal language, despite our cultural
differences and our inherent egoism, is possible if there is a common interest. The universality of science is proof of that. I showed, in my analysis, how English has become the language of science as of the 18th century. All things considered, it’s possible for a universally constructed language to emerge. It would be a shortcut toward Mankind’s linguistic unification, compared to a naturally occurring universal language. We already have the universal language and thought abilities written in our DNA. Basically, we all already speak the same language since we all use sounds to express our thoughts. I showed, through the active initiatives section that in a not so distant past, humans have expressed their will to speak a universal language. Esperanto, Interlingua, the International Phonetic Alphabet, to name a few, attest to that volition. Another proof of our capability to construct a new language is linguistic arbitrariness itself. Why do we use the word cat to designate a cat, and the word dog to designate a dog, and not vice-versa? What I mean is that a universal language can be constructed thanks to linguistic arbitrariness. In the worse-case scenario, that is if the construction of a new language fails, the natural birth of a new language will still take place. It will just take longer to come to fruition, but it will happen. Who knows? The process leading towards the emergence of a single language is probably ongoing under our very eyes without noticing it. The fact that 40% of Mankind will live in Africa by the end of the century and that French is set to become the most popular international language can also be seen as a harbinger sign. Therefore, in terms of the possibilities for the emergence of a single and global native language, I can simply state by reiterating that if, linguistically, Mankind initially went from speaking one language to speaking many, Modern times humans are witnessing the reverse trend or a return to basics (for originally, all men came from Africa, where we all spoke the same language at first), meaning from speaking many languages to eventually speaking only one.
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Fritz Dufour is a linguist, MBA, DESS and an independent researcher in the fields linguistics, history, and sociology. He is a specialist in the translation of modern English texts and documents into French. Besides this book, his personal works include:

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Keywords: Emergence of a single language, Linguistic awareness campaign, Haitian Creole, Esperanto, Language regulation