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Why Don't We All Speak the Same Language? Some Reflections on the Role of Cognition

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Abstract

From the psycholinguistic point of view, the use of English by non-natives in Europe poses an interesting contradiction, especially for the younger generation. On the one side, it is a non-preferred choice: Speakers have a natural tendency to avoid cross-group intelligibility, and are thus not keen in using a language that increases the amount of shared information, such as English. On the other side, English carries a specific system of values that are psychologically appealing to the younger generation, since it identifies with what speakers see in the media. As such, the new generations of Europeans experience an internal turmoil where the two tendencies, for and against English as a lingua franca, interact. One of the consequences of this particular situation is the use of English terms in local languages (so-called anglicism), a phenomenon rather common across Europe. Using the European situation as an example, this paper discusses the cognitive factors that drive the existence of (so many different) languages, as well as the factors that lead, in the opposite direction, to the use of a lingua franca among speakers.

Keywords: English as a lingua franca, Tribalism, Language and cognition

1. Introduction: One Biology, Many Languages

The renowned sociolinguist Tullio de Mauro (2014) argued that what prevents the European Union from becoming a real union is not the cultural difference between the various countries, but rather the linguistic diversity that is found among the speakers of the various countries and even within a single country. According to him, the cultural union of the European peoples will occur only when all European citizens will be fluent in a lingua franca. The European Union has, in fact, 25 official languages, and many speakers only know the native language of their

country and no second language. As De Mauro notes, if we consider all the minority languages, the count of European languages reaches 103, a considerable number. Among these languages (and despite Brexit), English appears as the only possible candidate to be a European lingua franca, since it is by far the most common second language in Europe (Hoffmann, 2000). According to the Eurobarometer, 13% of Europeans use English as their first language, and 38% use it as a second language. More than half of the European population uses English in their everyday life: The languages in Europe are indeed many, but English appears to be on a route to become the favourite choice for communication throughout the continent (and further, Jones, 2000, Jenkins, Cogo & Dewey, 2011, Maggioni & Murphy, 2018).

In addition, if we look beyond the borders of the continent, we realize that the number of languages in Europe is after all limited (Alexander, 1999, Romanov, 2000). In Asia, for example, there are about 2,000 languages. In the Indian peninsula alone, there are 170 languages. If we still broaden our gaze and try to count all the languages spoken in the world at this time, we realize that the number exceeds 5,000 units. If one reflects a moment on this fact, a question arises: Why are there so many languages? If it is true that language is a biological property of our species, why don't we all use the same language in all the countries of the world?

If we try to combine this question with other considerations on the physical implementation of language, the fact that so many languages exist seems even stranger: all human beings (unless there is a hearing impairment or an impairment of the vocal tract), use the same articulatory system to produce language. The sounds of all human languages are produced through the friction of the air on the tongue, the teeth, and the lips. Then why are the sounds of languages so different from each other? If we all use the same articulatory system, why do so many different sounds exist? Several studies show that the articulatory system varies very little from one ethnicity to another, unlike other phenotypic properties. In other words, while it is true that there are concrete physical differences between the speakers from different regions of the world, these physical differences do not concern the articulatory system of sounds. After all, we are well aware of the fact that a native speaker of any ethnic group can learn any language, given the right environmental stimulus. If a new-born from Ghana relocates to Sweden, they will learn Swedish just like any other Swedish child. If we observe the activation of the brain, similarly, we find that all human beings use the same regions and the same circuits to produce and perceive language. The physiological basis of language is independent of a specific language.

Interestingly, linguistic variation seems to be constrained to certain features, and some aspects of language appear to be shared (or universal) and not prone to change. This typological consideration arose from the pioneering work of Joseph Greenberg, one of the leading linguists of the last century, who understood this phenomenon and attempted at creating a list of these universal principles. Some examples of Greenberg's universals are the following two (Greenberg & Kemmer, 1990):

1. All languages appear to have verbs and nouns.

2. All languages appear to be using pronouns.

Some other structures are better described as tendencies, where certain patterns are observed way more often than it would occur if they were due to chance, and yet they are not universal properties. For example, about nine languages out of ten have a default order where subjects are presented before objects and verbs (while the order of verbs and objects appear to be very flexible, with approximately a 50 percent prevalence of one order or the other). Interestingly, it appears that our brain is sensitive to these general principles, even though with training we can learn also artificial languages that do not respect them. An influential study conducted by Marco Tettamanti and colleagues between Milan and Zurich (Tettamanti et al., 2002) has shown that different parts of the brain are used when participants are trained with artificial languages that do or do not respect principles observed across human languages. In this study, participants were taught artificial languages that differed in whether they used rules attested in human language, or not. For example, one artificial grammar used a rule that says "put the article after the noun", while another artificial grammar used a rule that says "put the articles as the third item in the sentence". While subjects managed to learn both linguistic and non-linguistic rules, the analysis of their brain activation showed that the processes were performed differently. Only the rules attested in human languages entailed strong and consistent activation of language areas, while the learning of non-linguistic rules involved areas devoted to more general reasoning.

2. The Interplay of Biology and Culture

If the physiological basis of language is shared, why are languages so different from each other? To explain this concept, I will assume that language displays the fundamental traits of an independent cognitive system. To understand this idea, we can compare language to vision (Jackendoff, 2019). Like vision, language is a complex cognitive system, which must be stimulated by the environment within a certain time window and has a precise brain foundation. There is thus a biological predisposition in each of us to develop both these cognitive systems, and there is a need for them to be stimulated to work and become active.

We normally assume that vision does not show any particular variation from one country to another. People living in England see just like the people living in China or Italy. At least, this is what we normally take for granted. Although with no doubt the main properties of vision are universal, it seems that some aspects of vision change with different cultures. To explain this concept, I will use a very famous optical phenomenon, discovered by the German psychologist Franz-Carl Muller-Lyer at the end of the nineteenth century (Judd, 1905). Consider the two lines below. Which of them is longer?

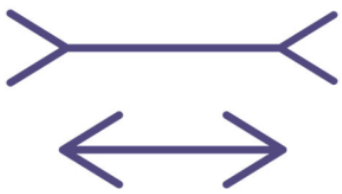

Figure 1. Muller-Lyer illusion

In all likelihood, you answered this question by indicating the top line. However, if you try to measure the two lines with a ruler, you will find that the length is actually the same in the two cases. One proposed explanation for the wrong answer we all give is that our interpretation is due to the creation of an internal representation of a space in three dimensions, in which the lower line is the close side and the higher line the far side of a room, in agreement with the position of the hooks.

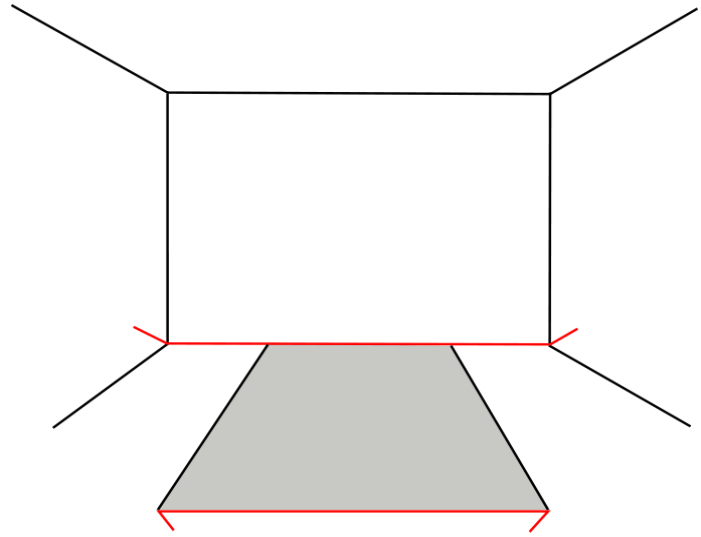

Figure 2. Interpretation of the illusion based on distance

Now, our brain "knows" that distant objects appear smaller, and therefore compensates for our perception. When we look at buildings from an airplane, for example, we do not have the perception that there are houses of tiny creatures below us, but we rather have the feeling that objects are small because they are far away. The highest line is considered to be a distant entity but is nevertheless of the same length as the low line. Our brain adopts a form of compensation based on distance and then concludes that the highest line is a larger object. If it had been the same size as the low line, being far away, it would have appeared shorter. Now, despite its natural and intuitive flavour, the phenomenon described above does not seem to have a biological root. During the last century, this optical illusion was tested all over the globe, and surprisingly it turned out that outside the Western world the effect is very weak or absent (Berry, 1968). How is that possible? Is it wrong to assume that human beings all see the same way? The answer to this question could be positive. There may (also) be cultural aspects that regulate the visual principles of our mind. In particular, it seems that the civilizations that do not build cities and houses using square shapes and straight lines are very little inclined to interpret in perspective the two lines of Muller-Lyer (so they are more accurate in saying that the two lines are of the same length). Now, do we have to think that, because of this cultural variability, vision is not a biological faculty? I have mentioned the cerebral implementation of vision, and such a statement seems absurd. Vision is a biological faculty, with perception varying slightly across different ethnic groups, depending on some cultural aspects. To be even more precise, it may be the case that the basic perceptual operation of transforming light into electrical signals is shared among all specimens, but the operations performed on these signals

are bound to cultural constraints, and specifically to the mind/brain patterns that these constraints entail. With the same reasoning we can turn our attention to language.

3. A Human Desire for Tribalism

All human beings use the same areas to process language, and lesions in specific areas of the brain give rise to dissociated language pathologies. In addition, the articulatory organs of sound are almost identical in human beings with a very different phenotype. Despite this biological homogeneity, we are well aware of the fact that there are thousands of languages, most unintelligible to each other. The question is then: Why? Why don't we all use the same sounds and similar words to talk? The answer to this question is not easy to give and is nothing but speculation. One possibility is that variability may be due precisely to the non-intelligibility of languages (Gluckman, 1960): we know that since the origins of *Homo sapiens*, the individuals of our species have organized themselves in groups, in isolated societies, often at war with each other (see Goodall, 2010, for an explanation of how the biological pillars of culture, including wars and education, are shared with other primates). This tendency to tribalism could be the basis for the existence of such a large number of languages: our ancestors had exactly the goal of not being intelligible with other individuals of the same species (Ambrose, 2001). In practice, the signals and protolanguages generated at the time had to be impervious to the interpretation of all the individuals who were part of other tribes, and our ancestors, therefore, developed a multitude of different languages (Dietrich et al., 2012). This phenomenon can still be seen today in some remote regions of the planet, such as Papua New Guinea, where, in a handkerchief of only 462.840 square kilometers (roughly the same size of Spain), 700 languages are spoken (Foley, 1986).

If we reflect for a moment, we realize that some tendencies towards tribalism are still present also in Western society, even in regions of the world with a general globalist trend. In Europe, for example, some social classes tend to develop dialects partially impervious to the understanding of the surrounding people. A famous example is Verlan, a dialect developed by the youth of the Parisian suburbs, in which syllables are inverted to obtain different pronunciation of the words (Lefkowitz, 1989). So, in Verlan, "femme" (girl), pronounced /famə/ becomes "meuf", pronounced /məf/ (note: the last vowel is not pronounced). The same principle was used to create the name of the Belgian singer Stromae, /stʁomaj/, Verlan for "Maestro".

In general, numerous studies, as already demonstrated in classic work of William Labov, show that it is in particular young people (of both sexes) and women (of any age) to encourage linguistic change, with the group of teenage girls being the actual engine in the development of new words and forms, accounting for the majority of innovations (Labov, 1972, 1990, Thompson, 2015). Linguistic change often comes from a tribalistic push, in the sense that it serves to identify a group and make its language partially opaque, or at least different, from the standard language. What happens in modern societies is that these tribalistic pushes do not remain divisive for long, and indeed the linguistic innovations are often incorporated into spoken or even standard language. For example, after decades of use of Verlan, many of its words are now included in standard spoken French, and some are even included in the

dictionaries (such as the aforementioned "meuf"). This phenomenon nullifies the attempt to isolation of the people who have introduced change, and it also nullifies the creation of new languages. Besides, the tribalistic push is also counterbalanced by an opposite push, that of having a common language that allows separate groups to interact with each other. This brings our discussion to English, the only language that seems to have a chance, in Europe, to become such a tool.

4. English as a European Lingua Franca

Linguistic tribalism is often nullified by attitudes that go in the opposite direction (Boyd & Richerson, 2009). This desire for cross-group communication results in the desire for the use and development of a shared language (so-called lingua franca) between people that grew up speaking different languages. The need for a lingua franca is ancient and goes back to at least the Romans, but with the interconnection related to the use of the internet, it has become an unstoppable phenomenon. In our society, this bridging role is taken by English (Maggioni & Murphy, 2018). Europe is no exception, and English is a lingua franca for many Europeans. In today's Europe, the use of English is perceived as carrying some level of prestige, since it is instrumental to interact with the international community. Direct access to American media, as well, boosts this tendency and many young people across Europe attain nowadays a relative proficiency in English by watching American shows. The use of English in Europe is not a rare phenomenon anymore, though not yet a popular and totally widespread phenomenon either (Jenkins, Cogo & Dewey, 2011). Interestingly, the lingua franca can go as far as impacting local languages as well, once again watering any tribalistic push. In Europe, the use of English terms while speaking a different language (anglicism) is becoming very common (Furiassi, 2010), creating a particular contradiction: the lingua franca is the engine of linguistic change.

One shall not, however, make the assumption that the desire of a common language is always and necessarily a prevalent tendency in Western society. Even in Europe, in some cases, the separatist drive, if also associated with geopolitical phenomena, can still lead to the creation of new languages. This is what happened to Montenegrin, the language of Montenegro, not many years ago (Lowen, 2010). Following the disintegration of Yugoslavia, Montenegro became a region under the control of Serbia, and Serbian was the official language. The Montenegrin, a variant of Serbian, was seen by some in Belgrade (the capital of Serbia) as a degraded form of the official language (Ivic, 2001). As it may seem obvious at this point, Montenegrin was not a degraded form of Serbian, but rather a reflection of a tribalistic and secessionist desire. When Montenegro managed to gain independence, in 2007, Montenegrin was raised to official language status, thus legitimizing the linguistic variation that was already taking place. Serbian and Montenegrin still share most features and lexical items, but the linguistic separation is likely to increase with time, as long as the Montenegrins feel the need to be different from the Serbs and have a language to show this difference (Kölhi, 2012).

From the cognitive point of view, how does the spread of English in Europe compare and relate to the process just described? When talking about linguistic change associated with English, I mentioned that there are two phenomena at play at the same time, and these phenomena are very different from each other. On the one side, there is the use of English terms within other

languages (anglicism), on the other, there is the use of English as a shared language (English as a lingua franca). Undoubtedly the two phenomena are very different also from the cognitive point of view.

The first phenomenon, that of the use of English terms within local languages, is in some ways similar to what has been discussed for Montenegrin. The most important parallel is that, in both cases, the issue under the lens is the development of very subtle linguistic changes. When it comes to English influencing local European languages, these changes primarily affect the lexicon of speakers: Gradually, young adults and teenagers in Europe use an increasing number of English terms in their mother tongues, and they do so without necessarily speaking English. From the cognitive point of view, this phenomenon has psychological implications, but not necessarily psycholinguistic implications: The reasons that lead speakers to use English terms in their native language are interesting because they show us the desire of the European youth to identify with their role models in the media and possibly their desire of being "international". From a psycholinguistic point of view, the use of English terms in a mother tongue does not entail any particular changes in the linguistic system each speaker has in their mind. These foreign terms are simply absorbed in the lexicon of the mother tongue, particularly if speakers are not fluent in English. A good example of this kind is the use of the term "black" in French (Bogaards, 2008), employed to refer to black people (instead of the French "noir", now considered to some extent inappropriate). The use of this term while speaking French does not entail any linguistic change in the minds of French speakers. It is simply used as any other lexical item. The term carries a specific connotation since it is a foreign word, but that does not mean that the linguistic representation for this term brings an English-like structure in the mind of French speakers (Valdman, 2000).

The use of English as a lingua franca, on the other hand, is a different phenomenon. When people use English to interact because English is their shared language, we are not observing the loan of English terms in a different language, but the acquisition of a second (and often third) language (Cenoz & Jessner, 2000), in the form of a variant of standard English with some specific traits. From a cognitive point of view, the use of a shared second language in Europe has important consequences. Speaking two languages in everyday life has numerous cognitive advantages, and the use of a lingua franca in Europe could be the engine for these advantages to emerge: There is ample evidence that speakers who use two languages in everyday life have enhanced cognitive skills (Martin-Rhee & Bialystok, 2008), such as enhanced working memory (a volatile part of our memory) and inhibition (the ability to "turn off" irrelevant stimuli). Europe, a continent where bilingualism was considered with stigma in the past, is becoming a continent where most speakers are able to use English as a second language. Psycholinguistics research shows us that this path will surely have positive consequences.

5. Conclusion

In conclusion, with the necessary word of caution, one shall make two claims. First, despite the biological foundation of language, there are so many languages because human beings, as a species, tend to organize themselves in closed groups, and therefore have the desire to create walls of communication with the other groups. Languages vary massively due to this desire,

but always within some boundaries (possibly written in our biology). Second, the tendency to division clashes with the opposite tendency to form a globalist community. In Europe, this tendency drives to the use of English as a lingua franca. While the first tendency pushes toward the creation of new languages, and over millennia has helped to develop the thousands of languages existing today, the second tendency often has the side effect of extinguishing languages that are spoken by very small groups in the society. The second tendency is nowadays fuelled by the invention of the internet and long-distance travel. This new scenario opens many questions and challenges for our continent. Will we gradually reduce the number of languages spoken in Europe, or will tribalism counteract the globalist trend to an extent that a hundred languages will always be spoken? Will English become Europe's "first language", and the other languages will gradually disappear? Or will they remain our first languages, while English will be spoken as a lingua franca by the whole European community? Or, as a third option, will English be more successful as a driver of linguistic change in local languages, rather than as a lingua franca? The next decades will offer some answers to these questions.

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