Evolution of Language

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Evolucija jezika

Završni rad

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BA Thesis

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Abstract

The content of this paper will explore various ideas in the scope of linguistics in order to shed light on the evolution of language in general. The main focus of this paper is to argue for the role of language as a tool in human evolutionary history and to describe its evolution. Firstly, there will be an explanation and exploration of language and the notions connected to it: definition(s), ideas, and its role. Definitions by de Saussure, McWhorter, Sadowski and others will be cited. Secondly, the idea of the evolution of language will be further explored, especially its history, which will be explained by citing various scholarly articles in the areas of anthropology, linguistics and history. Two main theories on when language emerged will be given, citing various sources that provide sound arguments that justify the assumptions given. Due to the complex nature of the topic at hand, various scientific fields and their knowledge base need to be utilized in order to arrive at a satisfactory conclusion. Thirdly, the status of language as a tool, which is the central thesis being argued for in this paper, will be explored to its depth. Language can be thought of as an evolutionary tool that is to be used by humans as individuals and as groups in order to increase their chances of survival and to increase group cohesion, so sociology and its ideas will also inevitably have to be utilized. In the end, the potential glimpse into the future of language will be explored.

Key words: *language, evolutionary history, hominid communication, homo sapiens, language variety*

1. Introduction

Language is one of the traits of the human being that seems to be inseparable from the very notion of what a human being really is; it appears to be fundamentally linked to the basic traits that a human has. The main goal of this paper is to argue for the idea that the evolution of language vastly increased *homo sapiens'* chances for survival. Secondary to that goal will be to give a kind of a crash course on the history and evolution of language itself and to accentuate some parallels to the animal kingdom, where language appears to be a constantly evolving expression of itself, always evolving, changing, even "multiplying" by changing geographical locations, thereby changing itself, or by being molded and mutated respectively of the social circle where it is used. By being able to convey utterly complex and infinitely varied utterances via language, be it written or oral, the human being is able to create a society that is incomparably more complex than any other in the animal kingdom, regardless of the apparent specificity and beauty of some species' social groups and organizations. Various works and articles will be utilized in order to strengthen the arguments presented in this paper, all of them being works in which language origins and language use is explained and observed through a pragmatic, evolutionary lens. Øyvind Pålshaugen puts it eloquently by positing that language is a work in progress; an unending series of re-productions and new productions, viewed as a medium for the construction of reality and working only when it is in use (Pålshaugen 1998: 17) . Firstly, an attempt to define and explain language will be made. Secondly, a historical/evolutionary record will be presented of how language changed and how varieties emerged. Thirdly, an attempt to argue for languages' status as a tool that helped humans survive will be made. Lastly, a potential glimpse into the future of language will be made. In the following chapter, the idea of language, its definition, and its nature are discussed.

2. Language through Time and Space

A recurring theme of this paper will undeniably be the changeability of language, but first, a "classical" definition of language should be given. When trying to define language, one will undeniably use terms like "system", "signs", "symbols", "extralinguistic reality", etc. Brilliant linguists like Ferdinand de Saussure et al. have gone even deeper when trying to define language, for instance, separating the notion into *langue* and *parole*, where langue may be considered the ruleset of language, and parole the application of it, a speech act (Saussure 1915: 9-10). For this paper, an attempt to define language as a tool in the evolutionary "shed" of the human species shall be presented and compared to multiple other interpretations, such as the definition of language as change, as said by McWhorter (2001). Other scholars like Martin A. Nowak and David C. Krakauer argue that language evolved as a means of communicating information between individuals (parties) and in the basic "evolutionary language game", one may envision a group of individuals, namely early hominids, that can produce a variety of sounds, where information shall be transferred about a number of "objects" (Nowak, Krakauer 1999: 1). Pinpointing and presenting a satisfactory definition of language that would be concise and precise enough to unify all explanations provided by various scholars that are cited in this paper is a challenge. The only way to arrive at a good definition would be to quote multiple sources and attempts to explain what language actually is. According to John McWhorter, language may very well be juxtaposed to the idea of change, as is exemplified in the following quotation:

> Most of us are less aware that language, too, *is* change. All human speech varieties are always in a constant process of slow transformation into what eventually will be so different as to be a new language entirely. This change is certainly *influenced* by historical, social, and cultural conditions but is not *caused* by them alone; the change would continue apace even without these things. Human speech transforms itself through time just as vigorously, and even more so, in isolated hunter-gatherer societies where cultural change of any kind has been minimal for millennia. (McWhorter 2001: 16)

It seems that language as an idea, according to McWhorter, may be seen as being in a state of constant, unstoppable mutation, akin to a living thing. This is one of many areas in which it might be adequate to draw parallels between language and life as we think of it. By thinking of language as change, one arrives at that profound conclusion. Living things that live in the present may be seen as merely dots in a 4-D space (three spatial dimensions + a time line), a mere snippet in an

endless string of evolutionary change that has been given a name due to a human's notion of the present. It should also be noted that in order to understand how language is in a permanent state of change, one might compare it to a mountain, in that it looks indestructible, where in reality it is gradually eroding, only to be replaced by new geological formations that are created by geological collisions we never seem to perceive (McWorther 2001:16). Language may be compared to a living thing, as already stated, in a way that it fills niches left open in the linguistic ecosystem, akin to niches in the animal kingdom. Some traits and characteristics seem to always work when an animal has a specific "role" in its ecosystem, for instance, the idea of an apex predator would be an animal that possesses strong, bone-crushing teeth that help them neutralize their prey. Today's African lions do not stray too far away from that formula; they too possess elongated canines that help them down their prey, but more on that in the section "Language Variety". Not only can language be compared to life, but it is also necessary to argue for its status as a system. In *Tools, Language and Cognition in Human Evolution*, Kathleen R. Gibson paraphrases statements from psychologists and psycholinguists, where she reinforces the argument that language is exactly that, as shown in the following quotation:

> Many psychologists and psycholinguists consider that tools, language and intelligence rest on common cognitive and developmental substrates. Piaget, for instance (1952, 1954, 1955), suggested that tool-use, logic, mathematics, and language rest upon similar mental constructional capacities. (Gibson 1994:10)

In accordance to the idea that language is similar to other systems in that they rest upon similar ways in which they were construed, language may always be close to the word "system" in any thesaurus. Hardly had *homo sapiens* emerged, when the brain was developed enough to incorporate the capability to use language. Since that moment, up until today, language has undergone the process of evolution alongside all other traits in humans. To clear up confusion on how that happened, a historical approach will be made in the following subsections, alongside the arguments for the evident variety in languages (over 6,000 active languages exist today). In the following subsections, the topics of language history and evolution will be discussed in order to shed more light on the idea, the evolution, and history of language itself. One will inevitably observe that language, as already stated, must change as time passes. Various years will be given which might mark the beginning of language as humans know it, which will in turn shed light on the nature of language itself as it evolved through the millennia.

2.1 Evolution of language

One question imposes itself quite immediately, once one attempts to think of language as a changing system: How did language arise? According to Leslie C. Aiello and R.I.M. Dunbar, language arose due to the need for large groups of our early ancestors (Aiello, Dunbar 1993:184). That idea might have quite profound implications in linguistics, since it could potentially solve the "chicken or the egg" dilemma of language and intelligence. Regarding the origins of language in a linear sense, a natural answer, through deduction, would be something like this: surely there must have been an original proto-language. There must have been a "first" language, from which all subsequent "species", or varieties, arose. McWhorter expresses that very idea by using logic and referring to previous achievements in linguistics, as exemplified in the following quotation:

> Of course, it may eventually be shown that there is no genetic predisposition for language and that language is indeed an artifactual "graft" onto humanity rather than an innate trait (from my reading of the facts, this conclusion is just as likely to be reached in the future as the discovery of an innate language capability). Yet even here logic would dictate the reconstruction of a single original language: to propose that offshoots from the first group of human beings eventually developed language anew is to presume that this offshoot group had for some reason ceased using language in the past. But given the obvious advantages that language confers on the species, it is extremely unlikely that any human groups have ever cut out talking. Anthropologists have found no such human group in the present, for instance, although cultures do vary in how much they value speaking in general (the Puliyanese of South India barely talk at all after age forty; Danes tend to be on the quiet side; Caribbeans less so; the Roti of East Timor process silence as downright threatening and appear to talk a mile a minute all the time). (McWhorter 2001: 9)

Interestingly, the definition of a human as one thinks of it seems to be, again, inseparable from the trait of having language and vice-versa. Also, the idea of a "progenitor language" seems to be plausible, since it is logically sound to assume that humans had emerged in a specific location from which they spread around the globe, but more on that in the following subsection on language history, in which data will be given on when humans emerged, when language itself might have emerged, and how it mutated and changed over the eons.

2.1.1. History of Language

Language has its roots in the earliest times of human existence. McWhorter accentuates that through a "cocktail" of science disciplines and arrives at the following figure:

> Deducing from a combination of data from archaeology, paleontology, molecular biology, and anatomical reconstruction, we can be almost certain that the first human beings to speak language as we know it today lived in East Africa about 150,000 years ago. (McWhorter 2001: 4-5)

This precise year, namely 150,000, seems to be the singular point in which the first human beings are thought to have spoken a language. One must observe the absurdly big gap of a 150,000 years, and the first time civilization is thought to have begun, namely around 10,000 years ago. A sound assumption would be that scholars and scientists must mean that language took a certain amount of time to be developed enough in order to be used effectively for the rise of civilization. One might posit that there might have been civilizations that are now lost to the historical record, but that assumption is unsound because there is insufficient evidence. McWhorter goes into detail by further examining the evolution of hominids, including humans themselves, and the evolution of language use in it:

> We may never know how exactly when human language arose. However, as mentioned earlier, deduction suggests that it has most likely existed for about 150,000 years. Archaeological and fossil remains of human beings suggest that some feature possessed by Homo sapiens beyond simple brain size was crucial in enabling this species to take over the world. While the brains of earlier species of the genus Homo, such as *habilis* and the later, more sophisticated *erectus*, became increasingly larger over the millennia, no cultural development accompanied this increase in brain size. Human existence was typified by Homo erectus in northern China, who, in linguist Derek Bickerton's irreplaceable description "sat for 0.3 million years in drafty, smoky caves of Zhoukoudian, cooking bats over smoldering embers and waiting for the caves to fill up with their own garbage." Only with Homo sapiens do we see an abrupt cultural explosion: symbolic artifacts buried in graves, evidence of nomadic life styles following game instead of maintaining one home base and traveling farther to reach the game when it migrated (which appears to have been typical of Neandertals, who died out in the face of sapiens), and, by 35,000 years ago, a major turn in the intricacy of tools. (McWhorter 2001: 7)

An interesting observation of a detail in the quotation is that there were other human-related species next to *sapiens*, namely *erectus* and *habilis* (to be added is also *neandertal*), who got out-competed by humans. In conflict with that idea lies the argument that fully syntactic language (a language with clearly defined rules for creating correct constructions in that language) appeared a "mere" 35,000 years ago, as posited in McWhorter's book. He states that one sees the kinds of cultural rapid advancements among humans that mark them as indisputably "us" and that the possibility theoretically remains that language did not arise right when *sapiens* did, but instead only came into existence 35,000 years ago (McWhorter 8). The conflict arising out of the 2 assumptions mentioned is that there exists a cleft in the points in time when language arose; the difference lies at roughly 120,000 years. Building upon McWhorter's dichotomy of when language arose is Piotr Sadowski's data. In his book *From Interaction to Symbol*, Sadowski explores further the idea that language might have arisen 170,000 year ago, but that fully syntactic language arose earlier. By syntactic language, as Sadowski puts it, one means a language that is systemic in nature: "Symbolic signs are best exemplified by syntactic language, a system of communication and representation of the world found uniquely among humans and accordingly regarded as the prime marker of humanity" (Sadowski 2009: 21). This system did not need to be written/set in stone, but the community must have used the same ruleset in a given group, disregarding speech impediments and intelligence level. Sadowski formulates comprehensive arguments of when language must have risen, as exemplified in the following quotation:

> The appearance of arbitrary symbolic signs, most probably first in spoken language rather than in visual communication, alongside the older emotive and iconic vocal features, must have coincided with the arrival on the scene of the *Homo sapiens* around 170,000 years ago, with their diffusion from East Africa to the rest of the globe, and with the subsequent "explosive" genesis of visual culture between 60,000 and 30,000 years ago (Aitchison 2000: 161; Watts 1999: 113). The emergence of fully modern syntactic language was most probably correlated with the appearance of representational and decorative art, the introduction of burial rituals and the accelerated diversification of technology at the Middle-Upper Paleolithic transition (Carruthers and Chamberlain 2000: 6). Once the early nomadic hunting-gathering communities began to separate and disperse geographically, their languages also

> differentiated, eventually giving rise to the present variety of ethnic languages and dialects of the world. (Sadowski 2009: 231).

It is to be assumed, now, that language as one conceives of it today, must have appeared over 40,000 years ago because it coincided with the appearance of representational and decorative art. That argument should be preceded by the following: language coincided with a vast explosion of human culture, fueled by human intelligence and innovation. Thus, it is good to assume that language is the expression of human intelligence. Furthermore, Sadowski explains that:

> For Bickerton the appearance of protolanguage was unprecedented in the history of evolution – something that made possible what may have been the most far-reaching event since the beginning of life: the emergence of human consciousness and symbolic culture. The "Great Leap Forward," the relatively sudden explosion of human culture that took place some 40,000 years ago is best explained, argues Bickerton, by the advent of fully syntactic language at about the same time." (Sadowski 2009: 236).

A fact arises out of the quotation, namely that not only did language emerge alongside human symbolic culture, but it also warranted a safe and stable place for human civilization to thrive due to its innovations. As human moved and migrated alongside the hunted game, language spread around the globe. McWhorter explains how and where language moved in the following quotation:

> What we do know is that what was most likely one original language spread by offshoot populations first to Asia, with one group eventually migrating to Europe, while another spread in two directions: southeastward across Asia down to Australia and northeastward across the Bering Strait to the Americas (mounting evidence suggests that there were also some migrations across the Pacific to the Americas). During these movements, the original language eventually evolved into thousands of others, resulting in the roughly six thousand languages extant today. The process by which one original language has developed into six thousand is a rich and fascinating one, incorporating not only findings from linguistic theory but also geography, history, and sociology (McWhorter 2001: 7).

Since language had the perfect environment to thrive, following the human migration, it has also begun to undergo changes, conditioned by the geographical location. Herein lies the undeniable

similarity between language and life. Life tends to evolve and change according to its environment. Not unlike life, language tends to do the very same. As a human group moves about, the language tends to change alongside it. That very topic, namely language variety as consequence of its evolution, is discussed in the next subsection, where language variety and its trait to constantly change are explored.

2.1.2 Language Variety

In the previous subsection, it has been established that language changed as humans migrated around the globe. Once these human groups inhabited specific continents and regions, the language began to change from its previous form to the next one. This is one of the consequences of language evolution, namely that language tends to change as time passes and as humans change their environment be it through manipulation, social norms, or migration. The way in which language tends to develop into different variants of the original version, which is again comparable to replication in living things, or reproduction, is exemplified, in McWhorter's words: "During the Neolithic revolution, when a language spread across an area, it generally did so relatively slowly such that, by the time the spread was complete, the language had already developed into several new ones, which continued to spawn new ones in turn" (McWhorter 2001:132). It is safe to assume that language develops akin to the roots of a tree; it tends to spawn at least 2 more variants as a language develops, which is similar to how cells split into double its original number. This fact allows for an almost infinite number of language variants, or dialects, as humanity spreads. This progression would be accurate if there were not a certain number of factors which condition the genesis of new language variants. For instance, as McWhorter puts it, "In the New World and Australia, Europeans similarly overwhelmed Native American and Aboriginal languages, assisted by the germs that living among livestock had immunized them to but that quite often decimated indigenous hunter-gatherer populations on impact" (McWhorter 2001:260). This means that cultural factors are able to make a language "go extinct". A parallel to the animal could be that humans may sometimes be comparable to predators in that they eradicate other competing variants of language. Further examples mentioned in McWhorter's book would be languages connected with Europe and Asia, as exemplified in the following quote:

> (…) by the time Latin was disseminated throughout the Roman Empire, its progenitor Proto-Indo-European had elsewhere in Europe already split into several branches such

> as Germanic, Slavic, Hellenic (Greek). Then Latin itself developed into more than a dozen new languages, the Romance languages, while at the same time Proto-Slavic was developing into several new tongues. Thus, though Europe was once covered by languages now lost forever, this original diversity was replaced at least partly by new diversity. Furthermore, until recently, Europeans were unable to physically take over tropical and subtropical regions, where farming methods developed for temperate climates were ineffective and diseases Europeans had no immunity to tended to kill them, just as their own diseases tended to kill Native Americans and Australian Aborigines. (McWhorter 2001:261)

It stands to reason that languages are all equally valid, regardless of the period in which they are used, or in what situation and group they are used, since they serve the same purpose, namely to convey some type of information. There are no objective criteria by which science can value one language over the other, because all languages fulfill the same essential task, namely to convey information from one unit to another. Additionally, one might observe language variety genesis by looking at the example of Latin once more. McWhorter compares Latin to French, where French is the new Latin:

> Yet French is nothing other than Modern Latin: Latin s it changed through several centuries into a new language in the area that would become France. We only happen to be able to juxtapose the two stages in development of this one language because the advent of writing has preserved Latin for our perusal. When Latin arose, French did not yet exist; without Latin, there would never have been anything that could turn into French- in other words, French is Latin. When we say that language is always changing, then, what we mean is that the sentence from A.D. 1 gradually morphed, year by year, generation after generation, into the sentence from A.D. 2000. (McWhorter 2001:10-11)

The fact that Latin evolved into French proves that language always changes to the point of nigh-unrecognizability to the layman. Through change, language attains a new form, which is observable by humans as being a new variant of language. That is the very basis of language diversification. The vast diversity of languages, their variety, is merely an expression of the human, because the human tends to be extremely adaptable to his surroundings. For linguists, it is imperative to understand that all language is based upon the same principle, and that variety is acting as a mere "bonus". Adding to the idea that language doesn't always multiply indefinitely is

the notion that globalism and standardization are major players in putting an end to language diversification by standardizing language and spreading that very standard language as a Lingua Franca. McWhorter puts that very idea perfectly in the following quotation:

> (…) in the past few hundred years, the development of capitalism and the Industrial Revolution, and its resultant technological advances and encouragement of strongly centralized nationalist governments, have led a certain handful of languages to begin gradually elbowing not just many but most of the world's remaining languages out of existence. (McWhorter 2001:132)

This again is a real result of globalization, which may be thought of as the homogenization of human culture and way of life. In order to maintain an orderly system in which every part of the system is efficient, one would assume that singular, standardized language would be imperative and invaluable to the human society in which that language ought to be used. The "imperialist revolution", as McWhorter puts it, might be the reason why language diversification comes to a screeching halt. The following quotation exemplifies this:

> Thus even today's six thousand languages constitute a vast decrease in the number of languages that existed before the Neolithic revolution. Today, however, a second revolution, which some leftist political commentators term the imperialist one, is having an even starker effect on how many languages are spoken in the world. (McWhorter 2001: 260)

This notion, that globalization imposes a standardized language, could potentially mean the end of language diversity, but that is a bold statement, even if the statistics are on one's side. The unpredictability of language evolution lends credence to new languages arising spontaneously, simply because the factors seemed unobservable. As a language goes through decades and decades of gradual, slow change, it will inevitably be fundamentally different, given enough time. External and internal factors will change the language undeniably, because of the idea that language is changing. After having arrived at the idea that language inevitably changes, and as it changes, it spawns new variants of language, a critical assumption arises: is language a kind of tool that, through language evolution and higher intelligence, raised the chances of human survival, just as other traits and characteristics change to increase survival chances? More on those topics in the next subsection.

3. Language as a Tool

The evolution of language, which accompanied the human evolution in intelligence and general fitness to survive his environment, was a tool, increased *homo sapiens'* chances of survival. Being the central idea of this paper, various arguments will be presented in its defense. One of the arguments would be the fact that human language is objectively speaking more complex than any other animal means of communicating information. McWhorter puts it best by comparing it to various species:

> To understand this *(language as we know it)* requires awareness of two things. First, human language differs sharply in a qualitative sense from the various levels of communicative ability, marvelous in themselves, possessed by some animals. Bees can tell other bees where honey is located by a butt-waggling dance. Chimpanzees and other apes can be trained to use a rudimentary kind of sign language. Parrots have been trained to match words to concepts. (McWhorter 2001:5)

Additionally, McWhorter accentuates a critical criterion of human language, namely the fact that humans can express things that are on a level so abstract as to being unattainable by other animals. This is one of the most unique characteristics that differentiate humans from other animals in a non-morphological sense, that is in a sense that does not pertain to their physical characteristics, but to behavioral or information-transfer ones. Humans are infinitely more complex in the information conveyance sector in that they are able to refer to the past, the future, and to ideas that are not real or immediate, unlike other animals. The following quotation drives these points home:

> However, human language is unique in its ability to communicate or convey an open-ended volume of concepts: we are not limited to talking about exactly where honey is, to warning each other that something is coming to try to eat us, or to matching vocalizations to fifty-odd basic concepts pertaining to our immediate surroundings and usually focusing on bananas and desire. Neither bees, chimps, parrots nor dogs could produce or perceive a sentence such as "Did you know that there are squid fifty feet and longer in the deep sea? They have only been seen as corpses washed up on beaches." Because animals can only communicate about either things in the immediate environment or a small set of things genetically programmed (…) they could not tell each other about giant squid even if they had seen one (…) Then there is the specificity for which human language is designed: no animal could specify that the squid have

> been seen in the past, rather than being seen right now, nor could they communicate the concept of "knowing" in "Did you know…?" (McWhorter 2001: 5)

As seen in this quotation, language allows man to realize and actualize previously unattainable things. Humans can build complex cities and structures, they can create beautiful art, and they can conquer other groups of humans. The beauty of all that lies in the fact that humans can eternalize those things in writing – in language, because language had evolved to the point where almost every conceivable idea can be realized in language itself, simply by abiding to its roles so that humans knowing that language can read it and use it. As Sadowski puts it, language seems to have been the only logical thing that was necessary for humans to express their goals and intentions, as shown in the following quotation:

> As argued by Steven Pinker and Paul Bloom, the preference for arbitrariness turned out to be a more effective option from an evolutionary point of view, in that it resolved a difficulty of developing a huge innate code for numerous sound-meaning iconic correspondences. Instead, it was neurophysiologically easier to evolve a mental device for learning arbitrary sound-meaning pairs peculiar to one's speech community, a process that also enhanced group cohesion by increasing cultural diversity along linguistic lines (Pinker and Bloom 1992: 465–470; Knight 1999: 243; Nettle 1999: 214, 219–224). (Sadowski 2009: 232)

Using language in the human sense increases one's chances of survival and are evolutionally speaking beneficial for one's survival by means of increasing something called group cohesion. Group cohesion is a phenomenon in sociology which postulates that a group has a certain level of "sticking together" and being part of a whole, which makes individuals within the group feel secure and happy, thereby increasing chances of procreation due to an adequate environment for raising offspring. Sadowski drives the point home yet again by giving various scenarios in which the only and exclusive logical solution would be the use of a relatively complex structure of symbols and concepts uttered by the vocal organ – language:

> Like contemporary hunter-gatherers, their Upper Palaeolithic predecessors were accomplished tool makers and superb amateur biologists with detailed knowledge of the life cycles, ecology, and behaviour of plants and animals they depended on. Language would surely have been useful in such a lifestyle, by enabling its users to communicate precise information about time, space, and objects in the natural

> environment, as well as about the intricate social relations, mutual commitments, obligations and alliances (Pinker 1995: 404). Organized group hunting in particular required coordinated social participation in the chase, effective social control of food sharing, and unambiguous knowledge about who does what, with whom, with what, where and when (Crook 1980: 130). Visual communication is of limited use during the group hunt, with the hands busy holding weapons and the eyes fixed on the tracks and the pursued game. During marching or running through dense overgrowth hunters often do not even see one another, calls of warning, simple vocal instructions and commands remaining the only viable way of effective and quick communication needed to co-ordinate the chase. Given the preference for meat in early *Homo*, Steven Mithen also suggests that increased consumption of meat obtained by group hunting or scavenging involved food sharing, division of labour, and organization of movement around a home base. Combined with pair bonding and male investment in child rearing, these socio-economic conditions in turn led to prolonged infant dependency and childhood learning, facilitated by the communicative abilities of the verbal language. (Sadowski 2009: 240)

Based on these ideas, language can finally be explained as being pivotal, through its evolution, to humanity's ascension to the "throne of life". By being able to express precisely the things that guaranteed them survival, they managed to thrive and remain at the echelon of life for so long. Another interesting consequence is the uniqueness of language in humans, which hasn't been observed in other species on Earth. Arguing for syntactic speech to have evolved in early hunter-gatherer societies, Sadowski manages to stress language's role as tool in its survival arsenal by accentuating the biological aspect of it – the brain:

> The ever-growing complexity of social life in the early hunting-gathering communities also appears to have required syntactic speech as an effective method of interpersonal communication to facilitate social negotiations and to ensure stability of social life. Derek Bickerton argues that the main reason for the explosive growth of brain-size in humans (over threefold within the last three million years, creating the highest brain-body ratio of any species in earth) is the unprecedented mental capacity of language (Bickerton 1990: 44). Within the human brain, the prefrontal cortex is more than twice as large as what would be expected for a primate with a similarly sized brain. Although the prefrontal cortex is not considered a "language area" per se, it appears to play a critical role in language processing: it is the primary area for working memory, that is,

> for storing representations in the mind for immediate use – a computation that is crucially involved in both producing sentences and comprehending their meaning (Hauser 1998: 113; Frankish 2000) (Sadowski 2009: 240).

The implication of language constantly following *homo sapiens'* tendency to achieve greater feats of innovation and intelligence through gradual improvement in health and well-being has some startling implications. Will language change to a reduced form of its former self, as languages tend to do, or will there be a new, artificially constructed language that might become the new Lingua Franca; these questions belong to the realm of futurism and potential scenarios of the future of language. Interesting to note would also be the prospect of increasingly advanced technology, especially in the communications branch. Language itself, conveyed through text or words, may become obsolete as the possibility of microchips inside the brain that would allow instantaneous transmission of thoughts is starting to become a serious possibility. In the following section, the conclusion of this paper will be formulated.

4. Conclusion

In conclusion, it is safe to assume that, having given arguments for the case of language evolution being pivotal to human survival, language may be thought of as a tool in the human's "survivalist shed". By using that tool, *sapiens* created culture, civilization, art, ideas, inventions, etc. Since *homo sapiens* is a social being, language tends to thrive in groups in which there is a solid amount of group cohesion and sense of belonging, regardless of the group size. Through 150,000 years of gradual change and evolution, language managed to increase in number from one, singular proto-language, to over 6,000 languages one observes being in use today. It is necessary to accentuate that dialects are also languages in the sense that they are distinct from the standard language of a nation/social group in power. If one took that into account, and took all the extinct languages into account, the number of languages that existed during *sapiens'* existence on Earth would surely be startling to say the least. What remains to be seen is where language in general is headed. Judging by the recent things that transpired around the world, it seems that only a few select languages comprise an enormous part of the world's population. Languages such as Hindi, Chinese dialects, English, Spanish are exerting great influence over the world. They are but tools used by humans to spread the cultural influence of the users of their respective language. It seems that English is a kind of Lingua Franca in the modern world, which must be the view point held by most linguists.

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