

SUMARY: *THE FIRST WORD*

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Introducción a la Lingüística - T1

1. NOAM CHOMSKY

"Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind" **Noam Chomsky.**

His own reflection, show us the thinking of probably the first reference in the linguistic area since the early 1960: Noam Chomsky.

Chomsky began imparting speech that claims the idea of a universal grammar for each language that exists in some part of our brain. This universal grammar, according Chomsky's idea is natural of all humans but no other animal have.

For many years, Chomsky worked in his projects at MIT, developing several revolutionary ideas that disclose different point around the evolutions of the language and that finding evidences of family relationships between languages.

In 1957, the first book by Chomsky, *Syntactic Structure* was published. This book was a set of his notes, where he continued examining the language in abstract term and discussing the grammars of languages in a wholly new way.

Two years later Chomsky published a review of the psychologist B. F. Skinner's *Verbal Behaviour*. In this review Chomsky made a critics about the Skinners theory based in the idea of the language like a simple behaviour. According Skinner all animals, humans include, can develop the language like machines. The key idea in Skinners behaviourism was called stimulus-response, something that Chomsky catalogue like insufficient and not relevant model to knowledge about language because forget something fundamental that comes insides us, the infinite creativity of language.

While Skinner and Chomsky was submerged in a argument, one of the most eminent linguistic of that years, Charles Hockett, described *Syntactic Structures* as among the major advances in the studios of the language. Since that moment Chomsky's theory was expanded and his recognition go growing up. The next book *Aspects of the Theory of Syntax* (1965) solidified his reputation. In the new book, Chomsky talked about the notion that language can be divided into competence and performance.

In the late 1960s and 1970s, Chomsky became the most famous linguistic. People claim him like a genius, and call him the Newton, the Einstein of language. Logically, at the same time appeared multiple theorists that doubt and critics Chomsky's theory but the reality was that the advantages by Chomsky were, each time, more relevant.

In the 1980s Chomsky defined language as an idealized, perfect and elegant system located in a messy brain and launched the question: How did something so messy develop something so perfect? Something that according to the linguist, would be a mystery.

In spite of Noam Chomsky's progresses, the problem of language evolution remained for most the twentieth century but with several things more clear: the language is a perfect system, a capacity exclusively human, that can suffer evolutions and that possess a universal grammar to indicate rules and structures used in all language.

2. SUE SAVAGE-RUMBAUGH

"Such similarities, according to Darwin, were likely inherited from a common ancestor [...] if we want to look at early stages of linguistic development, it makes sense to examine our less-inhibited cousins" **Frans de Waals, professor of primate behaviour.**

While Noam Chomsky, with a big number of followers, defended the idea that language was a capacity that only humans possess, another theory was being developed: the use of language by other species.

After the experiments by some scientists and linguistics like Robert Sapolsky, appeared Sue Savage-Rumbaugh whose name will have an important place in the history of the language evolution. Her theory and experiments support the idea that the use of a language system not only is a capacity of humans but also can find it in some animals.

Her studies were focused in a first time in apes. In the 1970s, during a long period of time, she worked with bonobos. A couple of these apes, Kanzi and Panbanisha soon became the centre of the studies when they picked up words by being regularly spoken to during feeding, playing and grooming. Over many years these two apes learned how to manipulate keyboard that contained visual images, how to comprehend spoken English and also reached to be able to participate in two, three and four-way conversations like three-to-four year old children.

Thanks to Savage-Rumbaugh and her studies, several psycholinguists began to work with different apes and also other species, looking for the key of the evolution of the language.

The next stage came with another woman, Heidi Lyn who was working with dolphins. During the next decade, a lot of studies have been made to try to teach language to diverse species. The ape language

research led Savage-Rumbaugh and her colleagues to conclude that language consists of “a large number of component parts and interacting functions”.

Ape language research opened one window into the problems of language evolution. Probably the most important contribution of ape language research is its challenge to the traditional idea that other animals have a fixed mental bag of tricks, and humans are different because we have language and that makes us mentally flexible.

3. STEVEN PINKER & PAUL BLOOM

“All we argue is that language is no different from other complex abilities [...] and that the only way to explain the origin of such abilities is through the theory of natural selection.” **Pinker and Bloom.**

In the 1990s two scholars, Paul Bloom and Steven Pinker shook again the theory of the origins of the language with their theory **the natural selection**.

Both developed their career under the influence of Chomsky and Gould, and in many aspects they were agree with the main point of these authors. But in other aspects, Pinker and Bloom were developing a new theory that didn't believe in the existence of a specific area in the human brain that give the human the capacity of communicate, in the other hand, the scientists supported the idea based in a general natural evolution that give the human that capacity.

Chomsky declared that he was not at all opposed to the idea that language evolved, but he reiterated that there were factors in evolution other than natural selection, which were as likely to be significant. In this regard Chomsky, Pinker and Bloom were essentially in agreement, but their debate continued focused in other aspect.

Probably, one of the most important point that defined the thinking of Pinker and Bloom, is that they believed that Darwinian evolutions (base of their nature evolution theory) and Chomsky's universal and generative grammar were compatible because, according the authors, natural selection couldn't explain everything about the evolution of the language.

When their ideas became public through *Behavioral and Brain Sciences*, the two authors caused a great impact and more and more researchers felt that studying the origin and evolution of language.

In 1994 Pinker published *The Language Instinct*, that soon, become to convert in a bestseller. Pinker reached a great reputation and Bloom became professor at Yale and a successful author of many studios and papers.

4. PHILIP LIEBERMAN

"In the 1980s and 1990s, while Chomsky expressed no interest in its study, Lieberman was examining skulls, listening to apes, and testing brain, all in search of clues to language's origins." **Christine Kenneally.**

Philip Lieberman completed the studies in electrical engineering at MIT, but after working on a few real-world projects related with his major without too much enthusiasm, he decided to take linguistic class. Lieberman was student of the first linguistics class that Noam Chomsky taught. Surprisingly, years later they have taken opposite positions on the subjects of the evolution of language.

Since the first moment, Lieberman was very interested in the biophysics of speech. Often travelled to New York to teach at Haskins Laboratories and working at Brooklyn's Prospect Park Zoo. His observations and analysis made him discover the limits of apes to make human sounds. He was the first in revealed different causes that made a handicap to apes. One of the most important made reference to the physiology of the tongues of the apes, that clearly showed how their physiology, very different to ours, made them useless to articulate different sounds.

His investigations continued in different lines. Lieberman's first book, *The Biology and Evolution of Language*, was published in 1984. In it, he argued that in human brain there was an overlap between the parts that control bodily movements and the part that allow us to order thoughts and words in cognition and speech.

In 1990 Lieberman was invited by *Behavioural and Brain Sciences* to work with Bloom and Pinker. The three authors talked about language evolution and the most important issue was that, in contrast to Pinker and Bloom, Lieberman believed the incongruity between slow evolutionary change and an innate language-specific organ (Chomsky) was irresolvable.

Other important point that Lieberman provided was related to the connection between levels of language and the motor system. During years, Lieberman was working with Parkinson's patients and climbers in order to demonstrate that less oxygen the people breathed, more the comprehension of syntax degraded. That means that the basal ganglia are crucial in regulating speech and language. Basal ganglia motor is something we have in common with a lot of animals. The fact that a number of different animals use the basal ganglia for sequencing, suggests that there is no innately human specialization for simple syntax. With these ideas, Lieberman gave two new components to the language: part-primitive and part-derived.

In a relatively short time, academics like Savage-Rumbaugh, Lieberman and Pinker, in their different ways, have had enough influence to make the subject **a legitimate line of inquiry**. The investigations, experiments, debates, disagreements and engagement between them and other linguistics, give us important keys, but **the origin of the language continue being nowadays a topic with important mysteries**.