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## THE IDEA OF INNATENESS AND LANGUAGE ACQUISITION

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### ABSTRACT

This paper is about the link between innateness and language acquisition. On the one hand, innateness is the genetic ability of human beings to acquire language. That is, humans are born with a genetic capacity to acquire any language they are exposed to. On the other hand, language acquisition is the process of getting the language unconsciously through communicating with people in a society. This paper presents some ideas about innateness, language acquisition, mentalism, lateralization, environment and some more important opinions of scholars in this respect.

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### 1. INTRODUCTION

The importance of the innateness hypothesis during the process of first language acquisition is the concern of this research. The innateness hypothesis is presented by Noam Chomsky, that children are born with knowledge of the fundamental principles of Grammar. Chomsky assents with his theory that this in born knowledge helps children to acquire their native language effortlessly and systematically despite the complexity of the process. Acquiring language is the most difficult process of a child's maturation period. Yet, children do not seem to know how much knowledge they are acquiring and processing. In this research, this process is analyzed in the context of Chomsky's theories of universal and generative grammar and the language faculty. The process of first language acquisition is surveyed from the very first weeks of a child's life until the time that grammar is finalized. It is widely debated how children master knowledge of their native language. Criticism of Chomsky's theory is discussed as well as Piaget's constructivist and skinner's behaviorist as theories of language acquisition. Finally, the critical

period is discussed and compared to cases of abnormal language acquisition. It turns out that the Innateness hypothesis, although still not accepted as feat, has resilient and this thesis argues that it remains the strongest hypothesis to describe the way children acquire language.

Languages are built on grammar and vocabulary and each normal human being acquires at least one language. The way children learn their mother language is in many ways mysterious. Noam Chomsky mentions in his work, knowledge of language, that knowledge without grounds is not taught or learnt knowledge (Chomsky, 2004). A communicational rules and vocabulary is a purely human phenomenon. Every child is born with the ability to learn languages although it can be argued to what extent that holds. If a child is born into a typical linguistic environment, acquisition of language will come naturally. However, it is not easy to say what it is that drives children to acquire language both naturally and seemingly without learning it. Children everywhere in the world acquire the language from their environment and adopt it as their native language. They do so remarkably fast

and they master language even though they lack enough evidence or stimuli. Although studies of children's language acquisition have a solution to many aspects of the process of acquiring first language, there is no consensus on how children learn language. Children are not taught language directly until they begin school, but by that time they are practically fluent. In school, they will learn the irregular items of language as well as better vocabulary, from writing and reading and general etiquette in language but children are never taught how to access knowledge of language (Siogurjonsolottir, 107).

Thus, a whole new sub discipline has developed in recent years called psycholinguistics. This can be seen as the intersection between psychology and linguistics. It has also some relation with logic and the philosophy of language. It is also linked with neurolinguistics (the study of the neurological basis for language). The above discipline tries to show the relation between thought, mind and language. The conception of the relationship of thought, language and speech is clearly a mentalist one. According to that conception; a person is regarded as having mind that is distinct from that person's body. Body and mind are seen as interacting with one another.

In this work, we try to reflect the different views about Chomsky's belief that a sizeable part of early linguistic learning comes from innately specified language ability in human beings, and that the role of the environment and the like effects is no more than activating this process of language acquisition.

Additionally, Chomsky's other belief (acquisition of even the barest rudiments of language is quite beyond the capacities of any other wise and intelligent ape) will be criticized by psycholinguists owing to the obvious capacities of the trained chimpanzees to cope with some signs of language. More points are going to be discussed in the following pages beginning with "Chomsky and Mentalism" and ending with some views that stand with or against the question innateness.

## 2. Mentalism

Mentalism is a general term for scientific approaches to various phenomena that try to study

the properties of the human mind, rather than just their directly observable manifestations. In linguistics, mentalism is associated both with generative linguistics and with more modern approaches that go under the heading of cognitive linguistics. Mentalist linguists try to describe the mental patterns of language (or the internalized grammars) that underlie linguistic behaviour.

Lyons (1981:240-2) states that mind, in a more technical sense, covers not only man's reasoning faculty but also feelings, memory, emotions and will. So what is traditionally referred to as language and mind covers the more recent works in linguistics, i. e., psychology and the cognitive field in particular. Lyons (ibid) mentions that Chomsky and his followers claim that language provides evidence for (mentalism) including belief in the existence of mind. Chomsky and those who share his view are not committed to the view that the mind is some non-physical entity distinct from the brain or any other part of the body.

## 3. Lateralization

The lateralization of brain function refers to how some neural functions, or cognitive processes tend to be more dominant in one hemisphere than the other. The medial longitudinal fissure separates the human brain into two distinct cerebral hemispheres, connected by the corpus callosum. Although the macrostructure of the two hemispheres appears to be almost identical, different composition of neuronal networks allows for specialized function that is different in each hemisphere. Tackling the same subject, rather in details, Akmajian, et al (2001:528) states that for a century and a half, scholars have debated the question of speech and language localization within the brain. In 1860, scientists known as lateralizationists speculated that the functioning of specific regions in the brain was responsible for language. Some other scientists believe that speech and language were the consequence of the brain functioning as a whole.

Akmajian et al. (ibid) add that, in 1861, Paul Broca, a French surgeon and anatomist, mentioned that a patient who had had extreme difficulty in producing speech had been found to have a damage in the posterior inferior part of the

frontal lobe in the left cerebral hemisphere known as Broca's area or the motor speech area. Broca extended his claim about speech localization by reporting that damage to sites in the left cerebral hemisphere produces aphasia whereas destruction of corresponding sites in the right hemisphere leaves capacities intact.

Lyons (ibid: 248) returns to say that it is the brain that plays the most significant role in the operations that we normally describe as mental. The human brain is very complex. Its cerebrum is divided into two halves or hemispheres. The right hemisphere controls the left side of the body whereas the left hemisphere controls the right side. For most people language is controlled by left hemisphere. The above process is called localization. Lateralization is maturational in the sense that it is genetically preprogrammed. Lateralization appears to be specific to human beings. It is thought to begin when the child about two years old and to be complete at some time between the age of five and the onset of puberty. Thus, lateralization is a precondition to language acquisition and it begins at the same time.

In (1874), Carl Wernicke, a young German physician, could strengthen Broca's claim that left hemisphere structures are essential for speech. By that Wernicke could generate an intense interest in the hypothesis that different areas within the left hemisphere fulfill different functions.

It seems that scientists today agree that specific neuroanatomical structures of the left hemisphere are vital for speech and language but debates still continue as what structures are committed to the various linguistic capacities. It had been discovered that 70 percent of all individuals with damage to the left hemisphere experienced some type of aphasia (difficulty in speech). Alkmaijanel. al. (ibid: 528) continue to say that confirmation of left cerebral dominance has also come from many research techniques introduced, for example, by Wada (1949) and Penfield (1959). The above scientists were neurosurgeons and through surgeries in brain they could conclude that three areas of the hemisphere are vital to speech and language Broca's area. Wernick's area and the supplemental (motor area).

Wada, Clarke and Hamn (1975), Witelson and Tallie (1973) reconfirm the finding that suggests the readiness of the left hemisphere for language dominance at birth. All this, as we think, supports the idea that human beings are naturally equipped with what helps in producing and acquiring language and they differ in that from other primates.

#### **4. Acquiring Language**

Considering the process of acquisition, Lyons (ibid: 241) believes that what has been called as Chomsky and Mentalism covers the central problems in the philosophy of mind and the acquisition of knowledge. With that, Chomsky can be considered one of the rationalists who take the view that the principles whereby the mind acquires knowledge are innate that the mind is not simply a blank slate upon which experience leaves its imprint. The acquisition of language is a particular instance of the more general process of the acquisition of knowledge. This, as Lyons (ibid) believes, would raise the following question: *Is the possession of the appropriate concepts a precondition of the acquisition and correct use of the vocabulary of one's native language?*

Thus, and like predecessors in the rationalist tradition, Chomsky takes the view that language serves for the expression of thought that human beings are genetically endowed with the capacity to form concepts rather than other primates and that concept formation is a precondition of one's acquisition of the meaning of words. But Chomsky differs here from others in two respects. Firstly, he has made it clear that learning or acquiring the grammatical structures of one's native language is similar to the matching of a form of word with meaning. Secondly, he reinforces the idea that the nature of language and the process of language acquisition should be built on the assumption that there is an innate language acquisition faculty. Chomsky considers mind to be like any other body organs, like the heart or the liver which usually becomes mature according to a genetically determined programmed of development. Lyons (ibid 245)

#### **4. 1. Human Beings and Innateness.**

The innateness hypothesis is an expression coined by Hilary Putnam to refer to a linguistic

theory of language acquisition which holds that at least some knowledge about language exists in humans at birth. This hypothesis supports linguistic nativism and was first proposed by Noam Chomsky. Facts about the complexity of human language systems, the universality of language acquisition, the facility that children demonstrate in acquiring these systems, and the comparative performance of adults in attempting the same task are all commonly invoked in support. However, the validity of the innateness hypothesis is still debated. Empiricists advocate that language is learned. Some have criticized Chomsky's work, pinpointing problems with his theories while others have proposed new theories to account for language acquisition (with specific differences in terms of language acquisition compared to second language acquisition).

#### **4.1.1. The LAD and not the Environment**

Scovel(1998: 17-21) confirms the idea of innateness through saying that even at a very young age before they have any conscious awareness of the difference between parts of speech such as nouns and verbs, young humans rapidly acquire the notion that words do not combine randomly but follow a systematic pattern of sequences. This system allows young children to generate a wide range or linguistic utterances while chimp (the chimpanzee) does appear to have any pattern or system but randomly throw signs together in a haphazard fashion. Once more the above can be considered one measure of the weight of evidence for innateness and that the acquisition of human language is not based solely on the external influence of child's environment.

Yule (1996: 30 -32) verifies that human language is different from the language of other creatures. It is difficult for other creatures to develop an understanding of this specialized human mode of expression. Yule (ibid) says that the standard explanation for the expressions, commands and signals understood and followed by different animals is that such animals produce a particular behavior in response to a particular sound stimulus but do not actually understand the meaning of words uttered. After all, animals cannot produce human language. Moreover, we do not generally observe one of the species learning to

produce the signals of other species. Baby and puppy, Yule (ibid) adds, grow in the same environment and having mostly the same things but about two years later, the baby makes human noises and the puppy does not. A closer example would be Chimpanzees which do have 99% of its basic genetics in common with the humans. In an attempt to teach a chimpanzee to use human language, two scientists (Luella and Winthrop) in 1930 raised an infant chimpanzee called Gua with their infant son. The chimpanzee was able to understand about a hundred words but did not say any of them. Viki is another chimpanzee which managed to produce some rather poorly articulated words. The above example emphasizes the view that even high class animals do not have the ability to produce human speech sounds. It is right that apes, gorillas and the like animals can communicate with a wide range of vocal calls but they just cannot speak. We assume that when young human children make language like noises, we witness language development but when young chimpanzees produce (language like signs) in interaction with humans scientists are very unwilling to classify this as language use. This problem remains controversial and according to the given mass of evidence, we might suggest that the linguist, Noam Chomsky should revise his claim that acquisition of even the barest rudiments of language is quite beyond the capacities of even intelligent apes. The last statement of Chomsky seems questionable owing to the obvious reported capacity of the trained chimpanzees to cope with the barest rudiments of language (ibid: 36).

Scovel(1998 : 21) mentions that if linguistic stimuli from child's or chimp's surrounding were indeed solely responsible for language acquisition we would not expect such clear difference between the performance of these two primate species. Moreover Nim and the like apes, would have received a lot of encouragement for their performance; a matter that many children would not face. On the contrary, sometimes children may be discouraged and ordered to be seen and not heard. There are even cultures, American tribes in Mexico and Arizona which discourage young children from engaging in prolonged conversations. All the above encouraged Chomsky and other

psycholinguists to claim that a seizable part of early linguistic learning comes from innately specified language ability in human beings. It seems that Chomsky's position is accepted and strongly defended by a great many contemporary psycholinguists. Children and not other primates remain as creativewordsmiths, as evidenced in the following exchange between a friend and her two-year old daughter:

Daughter: Somebody's the door.

Mother: There's nobody at the door.

Daughter: There is yesbody at the door.

Scovel(bid) summarizes his view by saying that apes will never be able to be like human beings in their linguistic capacities and cannot even rise to man's collective behavior or his unique nature. By that Scovel supports Chomsky's views and ideas.

#### 4.1.2 Environment and Innateness: Different Views

Steinberg (1991 cited in Lennenberg, 1960) states that, with respect to the issue of innate ideas all rationalist theorists require relevant environmental experience to activate innate ideas. It could be held that the maturation of brain permits the development of ideas which in turn allows for the development of language. Thus, Steinberg (ibid) adds that he does not favor the innate ideas of Chomsky's e.g. (syntax doesn't have a genetic basis any more than do arithmetic or algebra). Whether or not biological maturation of the brain is or is not necessary for the development of ideas and thought is an issue which is unresolved. The rationalists disagree with one another on whether or not there are specific ideas for language and other ideas of knowledge such as mathematics. Steinberg (ibid cited in Chomsky, 1965-1966), for example, argues that there are ideas inherent in the minds which pertain only to language and they are separate from those involved in mathematics. Others such as Bever (1970) and Steinberg (ibid) argue that the innate ideas are of a more general nature. Thus we can say all rationalists do agree that innate ideas alone are not sufficient for the learning of language and some degree of experience is necessary to activate these ideas. All empiricists on the other hand, agree that no ideas which constitute knowledge are innate in mind.

For more let's check the following extract:

"It is enough to note here that concerning English, for example, since the English language itself is less than 2000 years old, it could not have become innate through evolution, furthermore, children whose ancestors come from areas with vastly different language backgrounds, e.g. China and Africa learn English no differently than do children whose ancestors come from Anglo Saxon backgrounds". Steinberg (199: 163: 164). All that contradicts with Chomsky's former claims about innateness and language acquisition.

#### 5. Conclusions

The following can be concluded:

1. The idea of innateness in which Chomsky is interested is still a matter of controversy and vast arguments between linguists.
2. Despite the experiments made and the surgical, anatomical results, what has been collected, I believe, cannot go beyond the theoretical ideas that cannot settle things.
3. Human beings and apes should inevitably be rather similar in some natural abilities.
4. Being so, it does not seem strange that chimpanzees which do have 99% of its basic genetics in common with the human being can understand some signals and produce some noises.
5. Considering the above point, it seems suitable that Chomsky should revise his claim that acquisition of even the barest rudiments is beyond the capacities of even intelligent apes.
6. As I believe, a simple comparison between the different former views of psycholinguists shows that the tendency is towards agreeing with Chomsky's idea that human beings are genetically endowed with a language acquisition device.
7. Finally, I think, man, being the highest rank among primates, should naturally have distinguishing capacities and of these capacities is the ability to successfully acquire and produce language.

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