

How do children acquire their mother tongue ?

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Abstract :

This paper aims to answer the question how do children acquire their mother tongue? In fact the question has been seen from different points of view. In other words, there have been three major theories that attempted to look for a reasonable answer. In this study I will present these three proposals which are: The behaviourist theory introduced by the American Psychologist "B.F Skinner", the mentalistic theory set up by the linguist "Noam Chomsky", the last one is the cognitive theory founded by the Genevan Psychologist "Jean Piaget".

Keywords : Children, Mother tongue, Behaviourist theory, Mentalistic theory, Cognitive theory.

الملخص:

تهدف هذه الورقة إلى الإجابة على السؤال كيف يكتسب الأطفال لغتهم الأم؟ والواقع أن المسألة قد شوهدت من وجهات نظر مختلفة. وبعبارة أخرى، كانت هناك ثلاث نظريات رئيسية حاولت البحث عن إجابة معقولة. في هذه الدراسة سوف أقدم هذه المقترحات الثلاثة التي هي: نظرية السلوكيات التي قدمها علم النفس الأمريكي "بف سكينر"، والنظرية الذهنية التي وضعتها لغوي "نعوم تشومسكي"، وآخر واحد هو النظرية المعرفية التي أسسها جينييفان علم النفس "جان بياجيه".

الكلمات المفتاحية: الأطفال، اللغة الأم، نظرية بيهافوريست، نظرية منتلستيك، النظرية المعرفية.

Introduction:

The major theme of psycholinguistics is to study why some children succeed and others fail in language acquisition. Whenever we talk about Psycholinguistics it is important to refer to language acquisition. Recently, this subject has become an interesting matter in cognitive science. Simply, this term refers to the process that takes place in every human being earlier years, i.e. it refers to the way children acquire their first language. **“The acquisition of language is doubtless the greatest intellectual feat anyone of us is ever required to perform.”**¹ Leonard Bloomfield, Language, 1933.

The study of language acquisition leads many psychologists to raise the question how do children acquire their mother tongue?

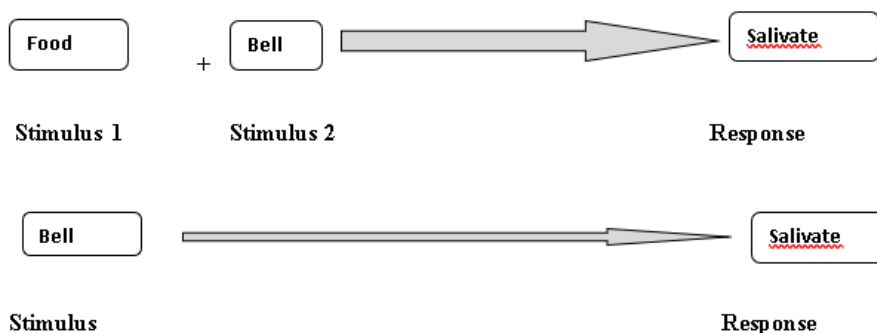
In fact this question has been seen from different points of view. In other words, there have been three major theories that attempted to look for a reasonable answer. In this section I will present these three proposals which are: The behaviourist theory introduced by the American Psychologist " B.F Skinner", the mentalistic theory set up by the linguist" Noam Chomsky", the last one is the cognitive theory founded by the Genevan Psychologist"Jean Piaget".

I. Behaviourism: In the early twentieth century, a new approach to psychology appeared in America. This psychological school is known as Behaviourism. This latter concerns itself with the

observable behaviour of people and animals, i.e. it does not believe in the unobservable events that take place in their minds. In other words, it emphasizes the physical and external process rather than the mental and internal process. **“Notably the behaviourists who insist that** According to the behaviourists language is a set of habits that can be acquired through the process of imitation and reinforcement. In other words, the environment plays an important role in the acquisition of language.

The principles of this theory are expressed in the work of the Russian Biologist Pavlov who presented the classical conditioning and the American Psychologist B.F Skinner who introduced the operant conditioning.

I.1. Classical Conditioning: Pavlov’s experiments on dogs explained how behaviour can turn into a habit using what is known as **stimulus** and **response**. Pavlov used food as a stimulus associated with a sound (bell) as a second stimulus. Through frequent repetitions it will be a habit for a dog to salivate whenever it hears the sound of the bell even if food is not presented



I.2. Operant Conditioning: In modern behaviourism, a new term has been presented which is **operant conditioning**. This latter was firstly introduced by **the psychologist Edward Thorndike** who tried to explain the process of learning through experiments done on animals. Later on, in 1938 the American Psychologist Skinner focused his work on illustrating the relationship between behaviour and the consequences of this behaviour. Skinner added the word reinforcement which denotes that if behaviour is positively reinforced, it means that this behaviour will be repeated and if it is negatively reinforced, and then this behaviour is not going to be repeated. To explain this, Skinner used a box that contains a hungry rat and inside it there is a lever. The rat discovered that by pressing the lever the food outside the box would fall next to the lever. So, because the rat is positively reinforced (food) the behaviour is going to be repeated **“In behaviourism view of learning a similar stimulus-response-reinforcement pattern occurs with humans as with rats or any other animal that can be conditioned in the same kind of way.”** ²

Skinner (1904-1990) wrote a book entitled **“verbal behaviour”** in which he explained how the process of learning a language takes place. According to him **“language is viewed as a kind of behaviour and it was proposed that children learn language through imitation, reinforcement, analogy....”**³

But to what extent do imitation, reinforcement and correction explain the way children acquire their first language? To prove that the following steps will give some facts that may illustrate more.

I.3. Language learning Through Imitation: One of the most effective behaviourist principles that explain the way children acquire their first language is through imitation, i.e. a child hears words and sentences from other's speech then, they try to imitate them. But it is still ambiguous how imitation is the mechanism that can be used to acquire language because many facts show the opposite. These facts are considered as follows:

1. Obviously, it is noticeable that children are able to produce indefinite number of utterances that they may have never heard before.
2. Children may produce some words and sentences completely different from what adults produce. For instance, an English child may use **goed** as a past of go instead of went and use foots as a plural of foot instead of feet. So, if adults' speech can not include such incorrect utterances, from where do children come with these words?
3. Newport and Gleitman (1977) studies of parents speech and its influence on children claimed that most of adults' speech is composed of either interrogative forms (e.g. what are you doing?) Or giving instructions and commands in imperative forms (e.g. do not touch) and they use just about 25 per cent of declarative sentences in their speech. Correspondingly, most of children speech consists of declarative forms. So, why do not children imitate the same style of speech that is included in adults' speech?

The following dialogue introduces a kind of imitation in which an adult is trying to make a child imitating his speech:

“-ADULT: He's going out -

CHILD: He go out.

-ADULT: That's an old-time train. -

CHILD: Old-time train.

-ADULT: Adam, say what I say.

Where can I put them? -

CHILD: Where I can put”⁴ them?

Although the adult’s speech was clearly understandable the child did not imitate the whole sentences because **“children are unable to produce sentences out of the rules of their developing grammar.”⁵**

I.4. Language Learning Through Reinforcement and Correction:

Classical behaviourism had proposed another technique that explains the way children acquire their first language which is known as reinforcement and correction. This latter denotes that children may be reinforced positively or negatively. In other words, if a child produces correct grammatical sentences, an adult is not going to reinforce them negatively (since their sentences are grammatically correct, there is no need to correct them).whereas, if a child produces

ungrammatical sentences, then adults will correct their errors, which means that they reinforce them negatively.

As with the first proposal, reinforcement and correction can not be an adequate mechanism that clarifies the way children acquire language. The following points are going to illustrate more:

1. As we have seen before children have the capacity to produce and understand sentences that they have never heard or used before and most of time without any explicit reinforcement.
2. Parents usually do not care about the mistakes their children commit, but if they do, they do not give importance to the correctness of the grammatical mistakes as much as focusing on the correctness of the content or the report of events.

-Consider this example:

“If a father is putting on his jacket, his child expresses this by saying **“his jacket my father”**, in this case the father is not going to correct this sentence because the child is reporting a real fact. Whereas if a child said **“my grandmother is coming this evening”**. The child would be corrected because the fact is that she is not coming this evening but tomorrow.”

-See another example:

“-The child: *mæʃi papa wein*. (Is going my father where)

-The mother: dahaba ila soug. (He went to the market)”⁶

The mother in the previous example replies her child question without paying attention to the grammatical mistakes. In this case if a child considered his sentence as grammatically correct because his mother did not correct him (i.e. the child was reinforced positively), how will this child realize the correct rules and discover the appropriate forms?

Brown concludes that it is **“truth value rather than syntactic well-formedness that chiefly governs explicit verbal reinforcement by parents-which renders mildly paradoxical the fact that the usual product of such a training schedule is an adult whose speech is highly grammatical but not notably truthful.”**⁷

From all what we have said, we infer that neither imitation nor positive and negative reinforcement explain human linguistic development.

I.5.Critical views for behaviourist theory: In fact the behaviourist theory did not demonstrate in a perfect way the process of learning language. For that reason, many critical theories have emerged to prove the sterility of its principles.

Noam Chomsky was the leader of one of the most influential theories that objected the behaviourist principles used to interpret human linguistic development. In 1957 Chomsky wrote his famous book entitled **“A Review of B.F.Skinner’s verbal behaviour”** in

which he pointed out **“that much of the technical vocabulary of behaviourism (stimulus, response, conditioning, Reinforcement...etc.)If taken seriously can not be shown to have any relevance to the acquisition and the use of human language.”**⁸

In addition, if children acquire language through imitation and reinforcement why children use incorrect sentences and mispronounce many words.

II. Innateness Hypothesis: Behaviourist principles including (imitation, reinforcement, and correctness.) have almost failed to explain the reality beyond how children acquire their native language, or, in other words, where linguistic knowledge comes from.

Basically speaking, language is the most complex system that only human species are able to acquire. Although its complexity children skillfully and quickly in a short period of time master the language they are exposed to, furthermore, researchers observed children acquiring different languages and who were subject to various cultural and social circumstances ,as a result they have concluded that all children pass through universal developmental stages.

In addition, despite children receive adults’ speech that is described as including ungrammatical sentences, slips of the tongue, and incomplete utterances which are known as **impoverished data**, ultimately they end up recognizing some aspects of grammar that they are not available in the linguistic input. For instance, children hear a limited number of utterances, then they will be able to produce and

understand infinite number of sentences, as well as, although children are not taught which formation of sentence is true and which is not, but by the end they get this knowledge. Now the question is: from where does this linguistic knowledge come?

In fact, after two years from the publication of skinner's book entitled **Verbal Behaviour (1957)**, Noam Chomsky wrote his book entitled **A Review of Verbal Behaviour (1959)** in which he strictly criticized the views of behaviourist psychologists. This linguist suggested that children are born with blank slates is a misleading conception, rather he assumed that all human beings are equipped with an innate blueprint that provides them with the significant knowledge for their language. From the notion of an innate blueprint, Noam Chomsky introduced the **universal grammar** and then **the innateness hypothesis**.

Depending on the arguments of the uniformity of developmental stages and the impoverished input that is referred to as **the poverty of stimulus**, nativists have viewed that much of our linguistic knowledge is genetically endowed. More precisely, this innate knowledge exists in a place that Noam Chomsky named it as **Language Faculty** which is "**a component of the human mind, physically represented in the brain and part of the biological endowment of the species**" Noam Chomsky (2002:1)⁹. However, to understand well this complex process, we have first to identify the term **Universal Grammar** and its function in the process of language acquisition. By introducing this term Noam Chomsky aimed to find out the universal properties that

all languages share in common; moreover, the notion of grammar refers to the linguistic principles that all human beings have at birth.

“Universal grammar is the name given to the set of constraints with which all human beings are endowed at birth.”¹⁰

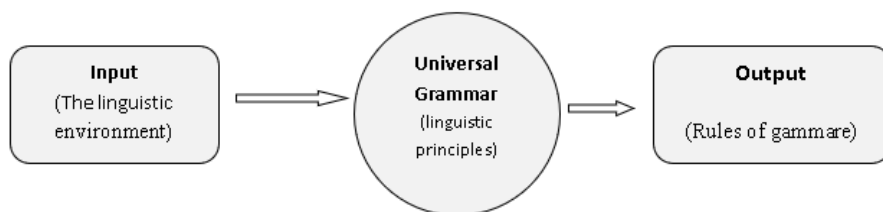
Thus, since these principles are conformed to all languages (universal), it is not reasonable to say that they are learned. In other words, children do not learn language rather the universal grammar provides them with the necessary knowledge to construct the rules of grammar of their language.

But, in fact, not all our linguistic knowledge is innate. Some aspects of grammar the child has to learn from his environment such as word order and the lexicon of the language. For instance, an Arabic speaking child has to learn that the verb becomes before the subject. Whereas, in Japanese language the object precedes the verb as in the following examples:

-Arabic: came Mohammed to me yesterday.

-Japanese: Mohammed to me yesterday came.

Yet, children do not need to learn general principles because they are in-born. Eventually, it is self-evident that according to nativists' point of view language acquisition is resulted **“from the interaction between innate factors and the environment”**.¹¹



III. Cognitive Theory: One of the most influential and interesting theories that has widely taken place in developmental psychology is the so called **Cognitive Development**. This latter refers to “**the process of maturation within which genetics and experience are interact.**”¹² In fact, this theory has introduced by the Swiss Psychologist **Jean Piaget (1896-1980)** who attempted to explain the way children use language to learn things, in other words, how can thought take place in children’s mind with the presence of language?

Jean Piaget suggested that cognitive development has a strong relationship with the development of language, Hence in his book entitled *Language and the Thought of the Child*, he elaborated on this issue assuming that “**language development as the logical extension not of social behaviour, but of cognitive development.**”¹³ In addition, he saw that some aspects of language are part of cognitive development.

Moreover, Piaget’s main concern was finding out the bond that exists between what a child is saying and what he/she thinks. Accordingly, he divided his theory into four main stages. Piaget claimed that when a child is talking, he is expressing what he thinks, i.e. they utter anything comes to their minds. Later on, Piaget gave

two types for speech which are the **egocentric** and **the socialized one**. In the egocentric speech children talk just because they find pleasure in doing so or they talk together without having intention to what others are saying. As far as thinking is concerned, Piaget divided thought into intelligent and autistic which are described as directed and undirected .The former refers to the thought that is mainly based on experience and logic ,whereas the second focused on the images, myths and unreal things.

In addition, in Piaget's theory there are two major processes through which it is possible to find out how children learn from their environment, more precisely, how they formulate their knowledge, concisely these processes are **assimilation** and **accommodation**.

* **Assimilation:** in this process, the mind alters and adapts the received information, then fits it with the things we know before.

***Accommodation:** in this process, the previous information is going to be modified and replaced by new one.

The resulted process from the combination of these two processes is called **the process of adaptation**.

To understand the way these processes work, we take as an example a child who uses the term "**mama**" to call his mother. He/she is going to use this name whenever he /she sees women looks like his mother which means that the child keeps this term in his mind. In other words, this child assimilates his mother with other women.

Through time, this child's experience is going to improve and transfer from assimilation to accommodation. Then he is going to distinguish between the two by asking questions. By the end the child adopts this new experience.

Besides, Piaget in his theory highlights the importance of experience and claimed that those stages of cognitive development are innate and genetically programmed. However, Piaget's theory has not left without criticism. Peculiarly; it was criticized for taking just a few members from the population as samples, as well as Piaget's experiments were not well controlled.

Conclusion:

Behaviourist principles (imitation, reinforcement), nativist and cognitive theories are all crucial theories that have to some extent tried to find out the ambiguous reality hidden beyond the way children acquire their first language or more precisely from where the knowledge of language comes. Yet, no one of these theories has perfectly succeeded. Simply, because each theory has viewed this complex process process from different angles.

References

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- ¹ -Victoria Fromkin ,Robert Rodman,Nina Hyams , *An Introduction to Language*, Michael Rosenberg, 9e,2009, p. 324.
- ² -Jeremy Harmer, *the Practice of English Language Teaching*, Longman, Third Edition, p. 69.
- ³-Ibid. p. 69.
- ⁴ -Victoria Fromkin, Robert Rodman, Nina Hyams, op, cit.p. 326.
- ⁵ -Ibid. 326.
- ⁷ -Victoria Fromkin, Robert Rodman, Nina Hyams, op, cit.p .326.
- ⁸-John Lyons, op, cit. p. 230.
- ⁹ -Muriel Saville Troike, *Introducing Second Language Acquisition*, Cambridge Introductions to Language and Linguistics, 2009.p.47.
- ¹⁰ -Maria Teresa Guasti, Language Acquisition, Massachusetts, 2002, p.17-18.
- ¹¹ -Ibid. p. 18.
- ¹² -L.Burben Robert and Maria Williams, psychology for Language Teachers, Cambridge University Press, 1997, p.22.
- ¹³ -Phillips Strazny, *Encyclopedia Linguistics*, Great Britain, Fitzroy Dearborn .2005, p.09.