LANGUAGE SEEN THROUGH THE EYES OF CHILDREN

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Abstract: *The language used by a child is in a constant development and change, as children actively engage in communication as they are learning how to communicate. A great deal of facts about language development still remains unknown to us, although in the end all normally developed children come to use language at about the same rate. In the present article, we will present three paths of research examining language comprehension and learning by children: how children break into the system of language, the ways in which children acquire the ability to rapidly combine the linguistic elements in order to determine the relationships between these elements and last, but not least, how children try and eventually manage to impose the grammatical structures onto the input they have previously perceived. The results of these insights will help us discover the ways in which children extract, manipulate and create the complex structures already existing within the natural languages.*

***Keywords*:** *language, children, acquisition.*

Background on Language Acquisition

"Thanks to words, we have been able to rise above the brutes; and thanks to words, we have often sunk to the level of the demons." (Aldous Huxley)

Despite the numerous differences in parent-child interaction patterns, all over the world, in the end all normally developed children come to use language at about the same rate. The process of language learning by children usually follows a certain pattern, being implicitly systemic in nature. It is a well-known fact that children must be exposed to a certain language in order to interact with the others, but how the exposure and interaction occur still vary from one case to another. In young children, acquiring a language is part of their overall physical, social and cognitive development. There is strong evidence that children may never acquire a language if they have not been exposed to a language before they reach the age of 6 or 7. Between the ages of 2 and 6, children find themselves in a process of becoming competent language users. Thus, by the time of their school-age, children have gained anamazing language ability, seen as a mere effortless acquisition (Newport, 1991:76).

A great deal of facts about language development still remains unknown to us. The language used by a child is in a constant development and change, as children actively engage in communication as they are learning how to communicate. Normally, the child must be the active party in the process of learning a language, making sense of it. Both his experience and interaction with others provide him with the necessary background that will help him to relate language to the relationship of sound and meaning. Children are born with a "communicative competence" and, therefore, they intrinsically understand the rules of grammar and the ones of using language. The child's own cognitive and social activities bring along the linguistic structure needed for

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him to understand and use language. The pattern of development between languages does not vary in the same way as the ways in which children acquire a language. Due to the fact that children acquire different languages by the same age, we can state that one language is not more difficult than another. Eventually, every child develops linguistic competence, learnt naturally within context, not arranged in an easy-to-difficult sequence. Lindfors (1991:134) supports the idea that both children and adults follow the same rules of communication behaviour, due to their constant success in achieving the goals of the communicative process. Educators should think of language as a "puzzle" with all the pieces (phonology, vocabulary, grammar, discourse and pragmatics) needed to come together for the language to really work (Tabors, 1997:90).

At the same time, language represents a very important way for us to interpret our past experiences and to learn from them, in order to make them comprehensible. At first, the development of children's language comes from their direct experiences, through its personal characteristic, being related to the present moment they live. As they understand language more and more, children can make connections with even more expanding situations. This is a necessary experience for the children to eventually be able to use symbols apart from actual situations. Due to the fact that for children language is both creative and imitative, they tend to use this language in a metaphorical way, provided that language represents a powerful tool for understanding the world around them.

Children usually modify their speech according to the audience; for example, when they talk to younger children. In this way, children begin understanding the social situations more and more, learning how to control their own thoughts and actions. One realizes the extent of children's knowledge regarding the language structure only by listening to their self-corrections or questions. Thus, the things articulated by children provide us with an understanding of what they can or cannot comprehend. Each child possesses a unique active and creative invention of language, despite the fact that the development of language is a gradual process, reflecting a child's cognitive capacities. For children, language should be purposeful, as they play and discover the world through this very language (Garcia, 1994:34).

Their development of language is expanded by children through relating what they already know to what they may encounter: "It is only with one foot placed squarely, securely within the known, the familiar, that the child can place the other foot in the beyond" (Linfors, 1991:282). Normally, children expand their language abilities through play, this being the fertile background for new vocabulary to be introduced, together with new ways of using it. Now children also have the opportunity to express their point of view, to solve disagreements or to persuade their peers to work together.

Therefore, language play should have a focus on those particular language elements that children will need later when learning about language. Language may become an important means of influencing behaviour and thinking, of one's own or even of another person. Many interaction opportunities should be given to children in order for these to improve and enrich their language. As children usually learn from speaking, they constantly feel the need to be socially competent and, at the same time, language competent. The central role of language is found in the way we communicate with others and also with ourselves (Sigrid et al., 2011:250). Or, put another way "Because Vygotsky regarded language as a critical bridge between the sociocultural world and individual mental functioning, he viewed the acquisition of language as the most significant milestone in children's cognitive development" (Berk & Winsler, 1995:12).

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Let us imagine one is faced with the discovery of the internal structure of a system containing tens of thousands of units, all of them having been generated from a small set of materials. In turn, all these units may be assembled into an infinite number of combinations. Despite the fact that only a subset of these combinations is the correct one, we consider infinite the subset itself for all the practical purposes. One must somehow discern the structure of this system in order to use it for his communication with others. And imagine this someone is a young child and the system is the human language, the units are the words, the materials are the small set of sounds from which these words are constructed, while the possible combinations used are, in fact, the sentences into which these words may be put together. Due to the obvious complexity of this system, it is unlikely that young children alone could discover its basic structure and use it in their process of communication. The astonishing fact is that most of the children unravel the secrets of this complex system, the human language, not only with eagerness but also with great ease, even from their first years of life.

In the following sections of our article, we will present three paths of research examining language comprehension and learning by children. Firstly, we will try do clarify how children break into the system of language, finding the words within the acoustic input for language learning. Secondly, we will take into consideration the ways in which children acquire the ability to rapidly combine the linguistic elements in order to determine the relationships between these elements. And last, but not least, we will follow how children try and eventually manage to impose the grammatical structures onto the input they have previously perceived, thus creating their own new language. The results of these insights helped us discover the ways in which children extract, manipulate and create the complex structures already existing within the natural languages.

Material and Methods

The study was performed on thirty children, aged between 1 and 3 years old, who studied at kinder garden. The survey period lasted for three months, with regular meeting sessions twice a week.

The methods used for this research were based mostly on the Behaviourist approaches, namely following the children's spontaneous speech, elicited production and elicited imitation. Behaviourist approaches were designed in the early 20th Century, involcing large group studies; the most influential behaviourist theory was proposed by Skinner in the 50s, generalizing his theory after a thorough study upon rats in order to explain how children acquire language (Skinner, 1953)

Children Discovery of Language Units

Children usually must determine which sound sequences are words before starting to map these words as objects of the world around them. In order to achieve this, infants must unveil some of the most important units belonging to their native language, all from a continuous stream of sounds, where words are sometimes surrounded by pauses. Even from the age of seven months, children successfully carve words from fluent speech. The raising question is how do children manage to learn the units of their native language so quickly? One attempt to answer this question was to present them miniature artificial languages that include some specific characteristics of the natural language structure. When a child has become familiarized with a sample of this language, a new sample (or one from a different language) was presented to him.

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Then, by observing subtle types of surprise (for example, the duration of looking towards new sounds) there was established whether the child perceived the new sample as the same or as something different. Thus, in this way, we could try to determine what parts of the artificial language were extracted by the child, leading us to insights about the mechanisms of early stages of language acquisition (Juscyik, 1997:178).

Saffran and his colleagues (Saffran, Griepentrog, 2001:80) have provided us with an important discovery using this technique, by examining the powerful role that statistical learning – by means of detection of consistent patterns of sounds – plays in infant word segmentation. For example, the syllables that are part of the same word tend to follow one another predictably, while syllables that go beyond word boundaries do not follow the same path. Furthermore, in a series of experiments, they discovered that children can detect and use the statistical properties of co-occurring syllables in segmenting new words. To be more precise, children do not simply detect how often syllable pairs occur, but rather the possibilities with which one syllable is predicted by another one (Aslin et al., 1996 : 1927). What makes this discovery astonishing is that infants as young as 8 months of age begin to make this correlations after only two minutes of exposure. Thus, by absorbing such regularities of apparently meaningless sounds, children are able to rapidly structure the linguistic input into relevant and, eventually, meaningful units.

The question is how much do extend the infants' capacities in order to detect linguistic sounds and learning in nonlinguistic domains? As an interesting comparison, children are also capable of detecting the probabilities with which musical tones predict one another. This fact suggests that the learning abilities used for word segmentation may also be used for learning music materials (Saffron et. al., 1999 : 34). These discoveries may lead us to the conclusion that at least some of the learning mechanisms described so far may not be applied only to language learning.

Children Parsing Words into Meaningful Units

The process of discovering the words of a language and their meaning to the world represents only the first step for the language learner. Also, children must discover how the distribution of such elements as grammatical endings or function words provide the further combined meaning of an utterance. In this way, children must discover and use their own language grammar in order to determine *who did what to whom*. This applies even to simple sentences such as 'Mum gave Johnny the milk' as opposed to 'Johnny gave Mum the milk'. Therefore, this parsing process is indeed an essential component of the language comprehension device, due to the fact that it allows children to assemble groups of elements in such manner as to make up crucial and new relational concepts of the world around them.

As far as adults are concerned, they quite easily parse sentences in order to determine their relational meaning. In fact, the studies on adult language comprehension point out that readers and listeners actually achieve this process in real time as each word is perceived. By measuring eye fixation and reaction time midsentence, these studies confirm that adults rapidly package incoming words into likely phrases, by using a variety of probabilistic cues purchased from the sentence and its referential context (Tanenhaus et. al., 1995 : 1633). In a series of studies, Trueswell and his colleagues (2004 : 136) have examined how the parsing system develops by recording the eye movements of children aged 4 and older while they heard instructions about moving objects on a table. The following interpretation process was provided by the children's

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visual interrogation of the scene during the speech. What raised a particular interest for the researchers was the children's reaction to the ambiguous instructions that required an implicit grammatical choice, such as 'Touch the Teddy bear with the stick'. Here, the phrase 'with the stick' can be linked to the verb 'touch' indicating how to do the touching or it can be linked to the noun 'Teddy bear', indicating which Teddy bear to touch. When faced with such choices, adults usually rely on the referential context and thus they pick the most plausible analysis for the current scene. But, let us see which analysis did the children choose? It depended on the type of linguistic cues found in the utterance itself. Thus, no matter how the analysis was given the scene, children interpreted 'with the stick' as how to carry out the action when the verb was like 'touch' which tends to mention an instrument as part of its event. As a contrast, the children tended to interpret this same phrase as choosing a particular Teddy bear when the verb was the sort that tends not to require an instrument, like 'feel', for example.

Moreover, just like the children in the studies of Saffran et al., who used probabilistic cues in order to assemble syllables into likely words, older children package words into likely phrases, by using a similar distributional pattern regarding these larger elements. Even though, there appears to be necessary further experience in order to detect the contingencies of when phrases are alike in given referential settings. In this sense, Trueswell et al. found that by the age of 8, children usually begin to parse ambiguous phrases in a context-contingent manner.

Acquiring Language by Creation

Although children may break into the words and phrases of a language by using distributional analyses, an important number of higher linguistic functions cannot be acquired with statistics alone. Children are, thus, faced with the challenge of discovering the rules that generate an infinite set, based on only one finite sample. Evidently, they are inborn with some additional language learning abilities that enable them to organize their language without any explicit guidance. These abilities are said to diminish with age and also they may be biologically based (Pinker, 1994 : 189). Even so, it is difficult to determine whether a particular linguistic element within a child's language was inborn or acquired. In this way, the scientific efforts to isolate such facts experimentally encountered a methodological complication: due to the children's acquisition of languages in the past, language input already includes products of innate biases.

Nevertheless, this logical circle may be broken by examining those rare situations in which the language input is incomplete or even impoverished. The question that comes to our mind is whether children that are deprived of exposure to a rich, complete language manage to build a structured native language. One case presented in the literature is the situation of deaf children in Nicaragua (Senghas, Coppola, 2001).

The Nicaraguan Sign Language first appeared only three decades ago among deaf children attending new schools for special education in Managua, Nicaragua. In their case, the language environment provided an incomplete linguistic input, as they were unable to hear the Spanish language spoken around them and they were deprived of an already existing sign language. The children responses were made by producing gestures that contained grammatical regularities not previously found in their input, thus creating a new, natural sign language. This particular language continued to develop and modify as new generations of children entered school and learned the sign language from their older peers. As a consequence, there was a great discrepancy between the input to which each generation of deaf children was exposed to and the language they

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acquired, emerging from the comparisons between the first generation of children and the second one.

Such a development may be determined in their expression of semantic roles, meaning in their use of language structure to indicate *who did what to whom* (like in the difference between *the cat eats the mouse* vs. *the mouse eats the cheese*). The first group of children came up with signs for the things they needed to talk about (cat, mouse, cheese, eat, etc.) and in a moment they started to develop ways of putting them together to form sentences. As an example, in order to describe an event, they named each participant followed by its role, as in *cat eat mouse* or *mouse eat cheese*.

The next wave of children acquiring the language added even more structures. Within a few years, not only the order of signs was important but also the place where they were to be produced. Thus, the children eventually developed spatial devices to indicate semantic roles, a feature that is typical of sign languages (see Supalla, 1982:67). Generally, without any contextual cues, adolescent signers usually gave a more narrow interpretation than that intended by adult signers, despite the fact that this signing was their initial input.

The findings presented above prove the fact that children can and will apply their own organizational biases to an input not so richly structured. Even in the cases of cues lacking from their environment, children can turn to inborn learning abilities in order to converge on a common language as a distinct community.

Conclusions

As a conclusion, the present study underlies the idea that eventually all children acquire language, through more or less the same mechanisms as imitation, parsing words into meaningful units and creation, depending a great deal on the language input that the child has been exposed to since birth until the moment of the research study presented here. The examples of language learning, processing and creation presented in this paper represent just a small number of the many developments between birth and linguistic maturity. Between these two referential points, children discover the "empty" materials in the sounds of their language, learn how they are assembled into longer strings in order to eventually map these combinations into meaning. These processes take place simultaneously, requiring children to integrate their capacities as they learn and thus to crack the communication code surrounding them. In modern times, beyond the reach of computer devices, children solve the linguistic "puzzles" by facing them even when they lack an expected structure.

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