

First Language Acquisition by Infants

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Abstract

Children do not reproduce their parents' language exactly. The way that children acquire their first language so quickly and easily has interested people for thousands of years. Considering the richness and complexity of this system, it seems improbable that children could ever learn its structure (Saffran, 2003). The main question in all modern studies of child language acquisition involves finding out what types of mechanisms underlie the acquisition of human language system. This case study was a developmental descriptive one that addressed three infants acquiring their first language in Iran (Kerman). The three infants were followed for a period of 12 months to see if they all followed a systematic pattern in language development. It seems that in the process of language acquisition, we can accept the possibility that first language learners come to the learning situation with an innate knowledge about language.

Keywords: first language, language acquisition, language development.

Introduction

Language acquisition by children is a skill that has fascinated linguists and psychologists for a long period of time. The language structure is a complex one and acquiring such complex system by children not long after birth is a mystery. The way that infants learn language with remarkable ease and speed makes it an interesting case of study (Lust, 2006).

Children who are acquiring their first language

do not reproduce their parents' language exactly. The way that children so quickly and successfully acquire language has interested people for thousands of years. Because of the richness and complexity of this system, it seems unbelievable that children could ever acquire its structure. The most important question in most of the studies done on child language acquisition involves finding out what types of mechanisms underlie the acquisition of human language system.

Language production begins as recall and imitation of simple words and sounds without the associated meaning, but as children mature cognitively, the connections between words and their meaning is formed (Kuhl et al., 1992). As a child grows older, new associations and meanings begin to be acquired and the vocabulary expands.

The human language system is a wonderful one. The process of acquiring such a system is likely to be nearly as complex as the system itself, so it is not surprising that the mechanisms underlying language acquisition are a matter of long-standing research (Saffran et al., 1996). Here is the most basic point in understanding how children learn a language.

It is difficult to believe that infants are able to acquire the hugely complex structure of language without being explicitly taught. Children, within a few years of birth, understand the grammatical rules of their native language without being explicitly taught, as one learns grammar in school. This puzzle attracts a great number of studies to the domain of first language acquisition. Through this study done on language acquisition by infants, it is

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hoped to crack a path to the depth of this mysterious ability.

Methodology

This case study addressed three infants acquiring their first language in Iran (Kerman). The infants were chosen as typical examples of other infants to be the representative sample of Iranian infants and were followed for a period of 12 months. The data collected for each infant was analyzed separately and the stages of development were reported considering the months being passed by the infants. This case study was a developmental descriptive one and the data consisted of in-depth interviews, observations, audio and video recordings, notes and reports.

Results

Language development in first language acquisition by Iranian infants (0-12months)

(0-2 months)

At this stage, the new born babies showed reaction to the sounds in their environment. They listened to the speech of those close to them, and got startled or cried if there was an unexpected noise. Loud noises woke them up, and they became still in response to new sounds. Infants a few days after birth could distinguish their maternal language from other languages. The new born infants distinguished Persian from English and Arabic and preferred Persian. They could tell apart two different languages, even when neither of them was present in their environment. They communicated through cries and body movement. As they could not speak because of their muscles' weakness, they showed their emotions by crying, touching, and moving their feet and hands. From the first days of their birth, different cries could be differentiated—they cried differently when hungry, upset, tired or wanted to be held. The babies started to coo and goo and babble with simple sounds. The natural sounds that babies made were crying, reflexive crying, coughing, burping, and swallowing which are called vegetative sounds. Sensory capacities were color perception, visual exploration, and oral exploration. The effect of the beginning of social smiling on care givers was dramatic—it was seen to signal the start of real pleasure in others and of personhood. New born babies let others know when they were experiencing pleasure or

pain by crying and making sounds. They knew their mother at first through her heartbeat, then her smell and later her voice. They made basic distinctions in vision, hearing, smell, taste, touch, temperature, and perception of pain. They made the distinctions through repetition; the faces, the voices or the actions that were repeated more were understood better (a special action or place could have a special meaning to them).

(2-4months)

At this stage, the infants learned to turn to their mother when she spoke, and smiled when they heard her voice. They seemed to recognize her familiar voice, and quietened at the sound of it if they were crying. The babies stopped their activity and attended closely to the sound of an unfamiliar voice. They responded to comforting tones whether the voice was familiar or not. They produced some vocalizations usually when they were comfortable and content. These vocalizations were typically made up of vowels and consonants, and are called cooing and laughter. They could produce reflexive sounds. Infants continued to discriminate their native language from other languages, but could no longer respond to distinction between two foreign languages. It seemed they had started to pay attention to the structure of their maternal language. The infants were not only showing evidence of coherent initiations and responses which involved the whole body, but were doing so within communicative exchanges. They recognized human voice. They smiled and visually fixated at a face.

(4-6 months)

At this stage, the infants engaged in longer and more continuous streams of either vowel or consonant sounds which are called gurgling sounds or vocal play while someone was playing with them or when they were occupying themselves happily. Babbling started at the end of this age range, babies sometimes sounded as if they were talking. This speech like babbling included many sounds including the bilabial (two lip) sounds like: p, b, and m. The babies could tell their mothers, using sounds or gestures that they wanted something, or wanted her to do something. They could make very urgent noises to force her into action. They continued to respond to a change in language (native language vs. foreign language), but not to a change in sentences uttered within a language. They showed evidence of ability for clausal segmentation in their native language. When content and playful, the infants used gurgling

sounds to show their pleasure. Babbling was more common, and the babies began to repeat simple sound combinations, such as da-da or ba-ba. This babbling sounded close to speech and it often appeared as if the babies were talking in their own language. At this stage of language development, the babies could often successfully communicate their wants and demands through sounds or gestures. To prompt parents into immediate action, babies used piercing urgent cries. Infants started becoming more interested in their environment, often turning away from familiar partners to watch distant corners of the room, lights, fans, etc. This changing interest coupled with the infants' (and partners') greater confidence in face to face interactions often served to raise the nature and level of boisterousness in the interactions. In order to gain or regain the infant's attention and interest in communication, the partner often resorted to rhythmic vocalizations and acted with abrupt changes or endings, using a theme and variation format. They recognized their mother, and distinguished between familiar persons and strangers, and no longer smiled indiscriminately. They distinguished affection from scolding. Sometime between this range of age they responded to the word "no". They were responsive to changes in the tone of voice, and to sounds other than speech. For example, they were fascinated by toys that made sounds, enjoy music and rhythm, and looked in an interested or apprehensive way for all sorts of new sounds such as the washing machine, birdsong or the mixer. It was the beginning of word recognition (e.g. maman, baba or infants' own names).

(6-8 months)

At this stage, the sound of the babies' babbling began to change and included more consonants, as well as vowels. During this period the babies began to say their first simple words, such as "mama", "dada" "tutu", "papa", etc. The children produced a series of consonant-vowel (CV) syllables with the same consonant being repeated (e.g. me meme, ba baba) which is called reduplicated babbling and later they produced CVC vocalizations (e.g. mam, bab) or VCV vocalizations (e.g. ama, aba) which is called non-reduplicated babbling. They used a few recognizable words which they invented for themselves which are called jargon. The development of jargon was an important stage in the acquisition of first language. Infants were sensitive to clausal segmentation. They preferred well-formed clausal segmentation, but they did not distinguish phras-

al segmentation as well formed or not. There was an increasing variety of sounds and reduplications at this stage. The infants were able to follow others' gaze when they looked at other things. The infants soon became able to call the attention of inattentive others to themselves initially by responding to mutual gaze and positive attention with smiles and pre-speech, then by vocal calling which gradually became clear and distinguishable. There was specific emotional attachment to their mothers, and they protested separation from their mothers. The babies responded to their names. They vocalized with intonation. They could remember and detect words in fluent speech, and remember words (from stories) heard two weeks earlier.

(8-10 months)

The babies distinguished phrasal segmentation as well formed or not in their native language. The sound of the babies' babbling changed. This was because it included more consonants, as well as long and short vowels. They used speech or other sounds (other than crying) in order to get others' attention and hold on to it. The babies' first words (not spoken very clearly) had appeared (e.g. mama, dada, baba, nini). Subject-predicate sentences with pronoun subjects did not show the same preference effects as those with non-pronoun subjects. They started to get sensitive to grammatical function morphemes versus phonologically dissimilar nonsense morphemes. The infants became interested in the exchange of objects with others. To adults, this developing interest and ability provided a new source of games and routines. Infants soon started to hold out objects to attract others' attention to them, and to offer them to others. Even when they were initially unable to completely release an object into the open palms of others, it was clear that the offered object has entered the communication as a topic. Even though the infants made no comment about the object, it nonetheless appeared to be something outside of themselves which the infants were seeking to involve others with. The babies obviously listened when spoken to, turned and looked at the face when called by name, were responsive to their own name, and discovered the fun of some simple games. The babies responded to human voices without visual cues by turning their head and eyes. They responded appropriately to friendly and angry tones, and labeling facilitated categorization for them.

(10-12 months)

The children imitated sounds, and responded to simple commands. They used one or more words

with meaning (this could be a fragment of a word). They understood simple instructions, especially if vocal or physical cues were given. They noticed violations of grammatical morphemes in novel sentences. They were sensitive to the word order of determiners and nouns, and detected when function words were replaced by nonsense words. The infants started to utter recognizable words. Some word-like vocalizations that did not correlate well with words in the local language were consistently used by infants to express particular emotional states: one infant used [aaji] to express pleasure, and another used [mememe] to express distress or discomfort. The infants started to deliberately produce actions which attract attention. They also deliberately repeated actions which they knew from past experience would produce positive attention or laughter in others. The actions were standard clever actions like waving or clapping, or they were nonconventional ones like shaking the head or making funny faces or loud shrieks. They recognized the names of familiar objects (e.g. baba, maman, aab) and began to respond to requests (bia to baghalemaman, papa robede be baba) and questions (tupetkojast? Babai-kush?). They waved bye-bye, and understood the meaning of “na” as a negative sign. They could give and take objects. They used a word but they meant a sentence (to express complex thoughts) mama meant I want my mother or where is my mother? It was the earliest evidence of comprehension. And the ability to actively seek a named object for frequent words was seen.

Conclusion

Children do not learn the language in all-or-none fashion. It is not an accident that can happen in any way, but it happens through a predetermined system. The new born infants cannot produce the vowels and consonants because of the weakness of its muscles as any other physical reaction. As Chomsky mentions, the new born babies all have the potential ability to walk, to stand, to talk or do any other physical reactions, but it takes time for any of this abilities to activate (Cook, & Newson, 1996). Infants start out without any formal language. They communicate through cries and body movement. Their cry is not just a simple and nonmeaningful reaction, but it is a try to speak meaningfully. Their cry or any sound that they produce will be different as their goal of what they want to say is different. If they are stomach ache, their cry will be differ-

ent from the one for being hungry. While young infants use their bodies, cries and other pre-verbal vocalizations in order to communicate, the language becomes more complex and structured as children grow and develop. Most children learn their first language without specific conscious instruction from parents or caregivers. At first their cry is the same for all infants around the world, and as the days pass, some consonants and vowels which are close to their mother tongue can be recognized in their cry.

Research has shown that the child's earliest learning begins still in utero, when the fetus begins to recognize the sound and speech pattern of his mother's voice (Lust, 2006); all the infants involved in this study got calm, and showed reaction to the voices that they had heard before birth (the voices of the ones close to them, the stories told to them before birth, and the languages spoken to them). Initially verbal expression begins as recall and imitation of simple words and sounds without the associated meaning, but as children mature cognitively, the connections between words and their meaning is formed. As a child grows older, new associations and meanings begin to be acquired and the vocabulary expands. Language development is a lifelong process, it seems clear that the basic capacity to learn language is innate, while the particular form/meaning connections of individual languages are acquired through prolonged exposure to a specific speech community.

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