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Creativity in children's speech development: a case study of Persian speaking children

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Abstract

This study aimed to investigate the innovations in speech development of Persian speaking children based on naturalistic paradigms of child language research. To this end, following a longitudinal observation approach, the naturalistic and experimental aspects of child language acquisition were examined as it was considered to have the advantage of producing spontaneous natural data. The data consisted of utterances by a number of children at an age range of 1;10 to 4;10 since it is considered a productive period for the creation of new words. The participants of the study included the researcher's own son, his brother-in-law's son, his niece and nephew, his neighbors' children, as well as a few children from a child-care center in Noshahr, Iran. To investigate the innovations in speech development of these children, instances of deletion, substitution, and inversion as well as creative processes such as making negative verbs, innovative rule-making in the utterances, and rule-overgeneralizing for inserting inflections were collected and recorded. The findings of this study chiefly support Clark's (1981) argument that creativity in children's speech results from the need of finding an acceptable word to fill a gap in the lexicon. Moreover, the findings confirm Lust's (2006) claim that children rely on their creative theory construction as a compensatory tool and productive device to create new words. Alternatively, the innovations that do not conform to the adult forms indicate that children have not learned the exceptions to the rules and less productive inflections conveying the same meaning; or may tend to convey the message from their own perspectives and to encode the events accordingly. The small sample used was a limitation of this study, nonetheless to arrive at broader generalizations, more supporting evidence from conducting studies on children's differences, their social interaction with others, and the role of linguistic input are recommended.

Keywords: creative processes, creative theory construction, innovative rule-making, Persian speaking children, speech development

1. Introduction

It is almost clear that any adult who tries to communicate with small children will experience creativity in children's speech development at some point. However, it is normal for mistakes (e.g., phonological deviations) to be made during this process. Based on Clark (1980), we often come across children using words which are not common in adult speech. This type of

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productivity and lexical creativity is widespread among children acquiring various languages. Regarding productivity/creativity in children's speech development, it is apparent that speech development in children is a gradual process during which speech patterns are first reproduced, and then eventually acquired. It can be postulated that since young children are still developing their *creatively-established* sound systems, their speech can at times be difficult to understand. This is particularly true in very young children, specifically those under the age of five, since they have not yet mastered the ability to organize sound systems in the same way that adults do.

Lust (2006) argues that the first twelve months prepare children for the crucial acquisition of first words. Yet as in the acquisition of syntax and phonology, the first twelve months only begin a long course of discovery and linguistic creation in the area of semantics. This course is marked by creativity and abstract construction by the child. O'Grady (2005), in the same vein, believes that from around age thirteen or fourteen months, give or take a few months in either direction, children start producing recognizable words. In this vein, creativity in children's speech development will be the central issue of the present study to be probed in more detail.

1.1. Analytic style vs. gestalt style of language learning

According to Peters (1977), a natural feature of language learning among children is that they do not necessarily have similar learning styles, for instance some children are initially better than others at finding words. In fact, there appear to be two different styles of language learning. The *analytic* style focuses on breaking speech into its smallest component parts from the very beginning. Children who use this style produce short, clearly articulated, one-word utterances in the early stages of language learning. They like to name people (*Daddy*, *Mommy*) and objects (*kitty*, *car*), and they use simple words like *up*, *hot*, and *hungry* to describe how they feel and what they want.

On the other hand, in the *gestalt* style of learning children take quite a different approach. They memorize and produce relatively large chunks of speech. Children's chunks of speech may often be poorly articulated and correspond to entire sequences of words in the adult language. This holistic sort of language learning is known as *gestalt* style. As we know, "Gestalt" is the German word for *shape*, and is used by psychologists to refer to patterns that are perceived as wholes. Based on O'Grady (2005), the following illustration gives some examples of gestalt style learning in English:

Child's utterance	**Meaning**
Whasdat?	"What's that?"
Dunno	"I don't know"
Donwanna	"I don't want to"
gimmedat	"Give me that"
awgone	"All gone"
lookadat	"Look at that"

(O'Grady 2005, p.11)

Some major characteristics of *analytic* and *gestalt* styles of language learning are illustrated in Table 1.

Table 1
Basic characteristics of analytic style vs. gestalt style of language learning (O'Grady, 2005)

Analytic Style	Gestalt Style
children initially better at finding words	children better at relatively large chunks of speech
speech broken into its smallest component parts	bulky chunks of speech memorized and produced
short, clearly articulated, one-word utterances	chunks of speech often poorly articulated
produced in the early stages of language learning	speech corresponded to entire sequences of words in the adult language
naming people and objects in the early stages of language learning	generally including holistic sort of language learning

Most of the psychologists believe that in spite of variations, it is probably best to think of the analytic–gestalt contrast as a continuum. In this vein, O'Grady (2005) suggests that no child employs a completely analytic strategy or a purely gestalt style. Rather, children exhibit tendencies in one direction or another.

A question may raise here, "Is there a reason why some children are more toward the gestalt end of the continuum and others more toward the analytic end?" The answer could be positive. However, the issue will be investigated later in the current study when we talk about the meanings of children's early utterances. However, the important point to remember is simply that both approaches to language learning work equally well, so there's no reason to be concerned about whether a particular child is following the right path or not.

1.2. Naturalistic vs. experimental paradigms of child language acquisition

Language acquisition is considered to be a complex, gradual, and creative process for children and hence it appears axiomatic that there is no single way of studying child language acquisition. Thus, when one begins to explore the literature in this area he/she will encounter a number of different research approaches. The two main methods of collecting data for this purpose are known as naturalistic and experimental. Naturalistic paradigms collect a sample of a child's spontaneous language use by recording it in familiar and comfortable surroundings, while experimental paradigms typically elicit a sample of the child's language through a specific task.

In the process of language acquisition, children progress at different developmental levels which most often vary from child to child, although the differences could become less prominent approximately around the age of five years. On the other hand, as Clark (1981) believes, whenever adults hear

children's new creations, they may easily interpret the intended meaning from the context and usually laugh at such childish "innovations". Adults, however, do not stop and think how and why children create these words. Considering this point, creativity in children's speech development, will be the central issue of the present study to be studied and discussed in more detail. More specifically, this study primarily aims to investigate and analyze the innovations in speech development of Persian speaking children and to scrutinize the strategies employed for their creation of new words.

2. Methodology

Considering the above-mentioned naturalistic and experimental dichotomy, the trend was mostly toward naturalistic paradigms of child language research in the present study, since it was recognized to have the advantage of producing more spontaneous, natural data. It also had other merits. During the study, the child was allowed to play freely with toys while talking with parents or other children. Meanwhile, it was mostly attempted that the researcher's presence during the data gathering, not prove disruptive and lead to less "natural" language behavior both from the child and the caregivers.

2.1. Participants

The data collected for the present study mainly consisted of utterances by different children including my own child (Samsam, who was then 2;2), my brother-in-law's son (Sina, 2;1), my niece (Atena, 2;10), my neighbors' children (Vania, 3;6, Behnad, 3;1, Mohana 3;8, and Roza 4;0), and also utterances by some children from a child-care center in Noshahr. I also took advantage of my nephew's retrospective utterances in the past (Mohammad, who was then 7;2), asking my brother to think *back* and record his reminiscences of his son's utterances, when he was almost 4;6.

The children between the ages 1;10 and 4;10 were selected purposefully, since it could be considered a productive period for the creation of new words.

2.2. Data collection and processing

The study started in October 2009, while my son, Samsam, was only 1;3 years old. To me, the way he developed his language oral skills was a great impetus to conduct the present study, over which I could generally track the child's ability in the creation and innovation of new words. It was almost self-evident to me from the very beginning that in such a far-reaching and time-consuming project, the researcher could not simply suffice to his own limited observations of simply one subject. Hence, I demanded for assistance on behalf of my wife who had some friends in a child-care center in Noshahr, Iran. In the meantime, some other people, including my relatives and neighbors were called for giving contributions to the advancement of the present study.

The children between the ages 1;10 and 4;10 were selected purposefully, since it could be considered a productive period for the creation of new words. Thus, the sources for data collection were:

1. my longitudinal record of my son's spontaneous utterances;
2. recordings of the speech of my 2;10-year-old niece and 2;1-year-old brother-in-law's son;
3. retrospective inquiries in which some neighbors were asked to think *back* and answer questions about their children' past;
4. casual observations and reports made over a long period of time, of under-four-year children in one of the child-care centers in Noshahr.

2.3. Data analysis

After data collection, the data including instances of deletion, substitution, and inversion as well as creative processes such as making negative verbs, innovative rule-making in the utterances, and rule-overgeneralizing for inserting inflections were analyzed qualitatively and descriptively.

3. Findings

Universally speaking, children, from the very beginning, creatively confront the acquisition of word and sentence meaning. We see that what may look like deformation in the child's early productions and in their early word meanings, actually indicates the child's linguistic innovations creative advancement.

The findings of the present study are for the most part based on the recordings of such creativity in the children's early productions. The study was based on wide-ranging personal observations and naturalistic data gathered longitudinally. For this purpose, for the majority of the data gathered I focused on the individual speech development of my own child, however, a few other children were also called for participation as the subjects of the present study. In Table 2 a classification of lexical development of Samsam in the first 20 months is illustrated.

Table 2
Classification of lexical development of Samsam in the first 20 months

People	daddy[baba], mommy[mama], baby[nini]/[nene]
Animals	dog[ha:pu], kitty[miomio], bird[juje], duck[kwak]
Body parts	eye [chesh], ear [gush]
Food	banana [moz], apple [tib], milk[a:m]/[ha:m]
Toys	ball [tu:], car [bi:b bi:b]
Cloths	shoe [kash]
Household objects	carpet [ka:li], keys [teli:d], spoon [kashok]
Routines	bye[ba:bai], hi [dala:]/[dala:m], no [na]
Sound imitating words	[moo], [meow], [baa baa],[kookoo], [kwak], [qa:r qa:r]
Activities	riding /playing with a car[bi:b bi:b], going to sleep [la:la:], eating/ asking for eating [ha:m]/[ha:mha:m]
Feelings and Emotions	fear[u:f]/[u:ffi], hatred/disgust [ax]/[kex], love [bahbah]

3.1. Findings on the Stages of language development

3.1.1. The babbling stage

After a long period of gurgling and cooing, children begin to babble usually around the six-month period. It consists of producing long sequence of vowels and consonants.

The importance of babbling is as follow: First, it serves primarily as practice for later speech. Second, children babble for social reward or simply for sheer pleasure (Jannedy 1994, p.268). During the babbling stage, the pitch or intonation contours of infants' utterances begin to resemble the intonation contours of sentences spoken by adults. Examples of this stage from Persian are:

1. [mamama]
2. [bababa]
3. [dadada]
4. [dededa]

(For a phonological transcription see Appendix I).

3.1.2. The holophrastic stage

Usually after one year, children begin to use the same string of sounds repeatedly to 'mean' the same thing. At this point of time, they have learned that sounds are related to meanings and they are producing their first 'words'. The holophrastic stage is known to vary from child to child and usually has nothing to do with how intelligent the child is. Most children seem to go through the 'one-word =one sentence' stage. According to Stubbs (1995:379) "holophrases are a feature of early child language". These one-word sentences (if one can call them sentences at all) are called holophrastic sentences. The first words uttered by a one-year-old child are typically utilized to name people, objects, pets, and other familiar and important parts of its environment. The first words also may show the child's reaction to the environment. The child's vocabulary soon comes to include verbs and other useful words as well as nouns. In Table 3 Samsam's speech development from 0;10 to 1;10 is presented.

Table 3

Samsam's speech development from 0;10 to 1;10

Age	Vocabulary Advancement
0;10	[baba], [na], [ta:ta], [ta:ti], [tu:]
0;11	[mama], [babai], [dal], [da:lli]
1;0	[nene], [nini], [bahbah]
1;1	[ye-do-da], [xoda]
1;2	[babaii], [mamaii]
1;3	[alo], [kojaii]
1;4	[ye-do-de], [kie], [chie], [a:b]
1;5	[maman], [nakon], [qa:r qa:r]
1;6	[beba(r)/bepa(r)], [hai], [dadi], [baibai] (imitations from Walt Disney's *Magic English*)
1;7	[ye-do-de-da], [ju:je], [miow]
1;8	[a:le *meaning* xa:leh], [a:ji], [aziz], [amme],[bia]
1;9	[xo:ka *meaning* xodkar], [az(i)zam], [ghaza xodam]
1;10	[dokto], [dalam], [bi:bbi:b], [babaii kojaii], [mama bia], [mama nakon]

In Figure 1 Samsam's gradual vocabulary advancement at the same stage is illustrated.

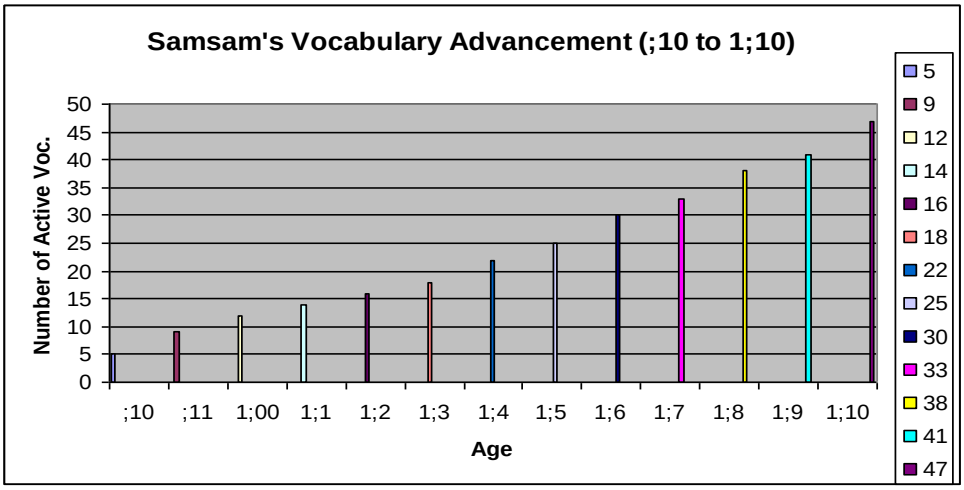

Figure 1. Samsam's vocabulary advancement from ;10 to 1;10

An important point to mention is that, for the most part, there is no clear-cut borderline to the stages of acquisition. In one case, Samsam being too far from his second birthday (when he was only 1;1) began to produce the three-word utterance [ye-do-da] [one two ten] to count! Whether he knew the meaning of the utterance made, and that the utterance was a three-word compound, or even it carried any specific meaning to him remained completely unknown to us. Of course, later the utterance changed into [ye-do-de] [one two three, (*probably*)] and even later into four-word compound [ye-do-de-da] [one two three ten]. The result here most likely indicates that there is no clear-cut borderline to the stages of acquisition and different stages of acquisition can occasionally co-occur, overlap together, or occur earlier or later. A main reason to this phenomenon is the hard fact that there is a great variability among children in the process of language acquisition.

Roughly speaking, a picture of the children's language at the holophrastic stage would most likely illustrate how much the young children has already acquired. Some of the other examples from the children observed and studied were as the following:

1. [baba] [ba:ba:] "father"/"man"
2. [mama] [ma:ma:] 'mother'/"woman"
3. [a:le] "aunt" "woman"
4. [a:ji:] "sister"
5. [u:f] "pain"/ "threat"
6. [bi:b bi:b] "car or any kind of vehicle"
7. [am]/[amam]/[ham] "milk"
8. [nene]/[nini] "baby/ child"
9. [dada] "picnic/going out"
10. [u:f]/[u:ffi] "anything the child is afraid of"
11. [la:la:] "sleep/ go to sleep"
12. [bahbah] "finish"

13. [a:b]/[a:bbe] "water/ I want water"
14. [ham] "food/ I want food"
15. [bede] "give me"
16. [maneh] "mine"
17. [aziz] "grandmother"
18. [xoka:] "pen"
19. [ju:jeh] "bird/s"
20. [xes]/[xesi] "teddy bear"

What is more interesting than merely the list of the child's vocabulary is the way the child uses these words:

a. When the child first began to use these words, the stimulus had to be present. But later this was no longer true. For example [bi:b bi:b] was first only used by Samsam when pointing to a car or any other vehicle in the street, but, later was used by him in pointing to pictures, toys or in asking to go in the car.

b. While many of these single forms are used for naming objects, they may also be produced in circumstances that suggest that the child is already extending their use. For example pointing to an empty bed while uttering the name of a teddy bear (say, Xe(r)si) who sleeps in the bed, even in the absence of the toy named, is an indication that the child could be capable of referring to the teddy bear (Xe(r)si) and the bed, but is not yet ready to put the forms together to produce a more complex phrase.

c. It has been noticed that only the words for animals which exist in the child's environment are replaced by their sounds, for example, [miao] for the cat, [kokoko] for the cock and [ha:p ha:p] (and later, [wohwoh]/[howhow]) for the dog; as a result, animals which do not exist in his/her environment are called [momo]/ [ha:p ha:p].

d. Phonologically the child's first words are like the words of most children at this stage of learning Persian, English and other languages, generally monosyllabic with a CV (Consonant-Vowel) form. The vowel part may be diphthongal, depending on the language being acquired. Its phonemic or phonetic inventory (at this stage they are equivalent) is much smaller than is found in the adult language.

e. The child's phonological inventory includes the consonants [b, m, d, t, k] which are frequently occurring sounds in the world's languages.

Many studies (Brown, 1973; Hopper and Naremore, 1978; Jannedy 1994) have shown that children in the holophrastic stage can perceive or comprehend many more phonological contrasts than they can produce themselves. Thus, at this stage, it is not possible to determine the extent of the grammar of the child simply by observing or noting child's speech production. Following Chomsky (1965), McNeill (1970) argued that knowledge of basic syntactic relation is innate and that children's experience with language merely provides the children with information for learning the relevant surface structures of their native languages. McNeill argued that single-word utterances have the underlying representation of a full sentence but that only one element of this underlying structure is realized in the

surface structure. Bloom (1973) also pointed out that children are not constrained to utter only one word at a time. Utterances longer than one word occur but they do not contain more than one word meaningful element.

3.1.3. The two-word stage

Around the time of their second birthday children begin to produce two-word utterances. However, this can occur earlier or later, since there is a great variability among children. At first two-word utterances appear to be strings of two of the child's earlier holophrastic utterances, each word with its own single-pitch contour.

Children begin to form actual two-word sentences, with the relation between the two words showing definite syntactic and semantic relations and intonation contours of the two words extending over the whole utterances rather than being separated by a pause between them. The two-word stage is a remarkable stage in the child's life during which the child acquisition emerges rapidly after his one-word stage. Now, the child is able to produce two - element utterances and makes semantic relationship between them such as:

i. Agent + Action
ii. Action + Location
iii. Action + Object

The following examples illustrate the kinds of patterns which were found in children's utterances at this stage:

1. [ma:ma: bia:] "Come, Mommy"
2. [tu: bede] "give me (the) ball"
3. [ba:ba:h bi:b] "father car"
4. [ba:ba:h rah] "father went"/ "Did my father go?" (depending on intonation)
5. [kafsh si:na] "Sina's shoe"
6. [ma:ma: nakon] "Don't do that, Mommy"
7. [nene lala]/ [nini lala] "(the) baby is sleep"
8. [miao ham/am] "(the) cat is eating"
9. [ba:ba:ii kojaii] "Where are you, Daddy?"
10. [ghaza xodam] "I had food"

The examples above could be evocative, and analysis of the data gathered through above examples shows some interesting hints about children speech development. Some points are as the following:

a. During the two-word stage, there are no syntactic or morphological markers, that is, no inflections for number or person or tense or gender and so on. For example, the child may address present as past, a singular as a plural or vice versa, or in languages like English or Arabic in which there is male-female distinction, the child may address a female as a male or vice versa. In general, pronouns are rarely used, although many children do use [man] "I"/"me" to refer to themselves and some children use other pronouns as well. It has been noted that in Noun + Noun sentences, such as [ka(f)sh Sina] "Sina's shoes", the two words can express a number of different

grammatical relations which will later be expressed by other syntactic devices. Thus, depending on different contexts, the phrase [ka(f)sh Sina] can be used to show possessive relation when the child is pointing to Sina's shoes or to show a Subject + Object relation in the situation when the mother is putting the shoes on the child or as a question " Is Sina putting his shoes too?" or as a request "I want to put Sina's shoes on." Another example is [ba:ba bi:bbi:b] which could probably mean "This is Daddy's car" or "Daddy went in his car" or the child is asking his father to take him in the car.

b. In this stage, children exhibit more phonological processes than adult speech does. Phonological processes may include deletion, inversion, or substitution. For example, William (1995) reported misanalysis of word-final "s" in English in the speech of a two year old child called April, as the following:

Word	**April's "singular" form**
box	bok
lens	len
trapeze	trappy
clothes	clo
Santa Claus	Santa Clau
sentence	sentent
upstairs	upstair

(Cited in O'Grady 2005, p.11)

According to William (1995) around age two, April was heard to say *bok* as the singular of *box*, *clo* as the singular of *clothes*, and even *sentent* as the singular of *sentence*. Finally, he concluded that breaking sentences into parts, in general, gets easier as children learn more words and become better at figuring out where one word ends and another one begins.

In the case of our subjects, children exhibited various phonological processes including deletion, inversion, or substitution. For instance, Samsam was noticed to utter [tup] "ball" as [tu] deleting a whole ending sound, and Sina uttered [salam] "hello" as [dala:] both substituting and deleting the initial and final sounds respectively at the same time. Further examples extracted from other subjects in the study could illustrate the same processes clearly. Some of the most noticeable examples were as follow:

1. [asb] "horse" as [as]/[abs]
2. [por] "full" as [pol]
3. [sala:m] "Hello" as [dala:]/[dala:m]
4. [khasteh] "tired" as [khashteh]
5. [sasa:] for [samsa:m] "name of a boy"
6. [ta:ta:] for [ta:b ta:b] "a play"
7. [azam] instead of [azizam] " my dear"
8. [ota:]/[ota:k] instead of [ota:gh] "room"
9. [as]/[ask] for [aks] "photo"
10. [ku:li]/ [ku:ri] for [ghu:ri] "teapot"

11. [moba:]/[moba:i]/[moba:l] for [moba:il] “mobile”
12. [gha:li] as [ka:ii]/[ka:li] “carpet”
13. [damak] for [namak] “salt”
14. [chesh] for [cheshm] “eye”
15. [faghir] “poor” as [fakir]
16. [shoto] instead of [shotor] “camel”
17. [a:li] instead of [xa:li:] “empty”

c. As was pointed out before, replacing one segment by another was a noticeable process. Further examples of the substitution processes in the subjects under study were as the following:

1. [naka:shi] instead of [nagha:shi] “painting”
2. [cha:wu:] instead of [cha:ghu:] “knife”
3. [teta:b] for [keta:b] “book”
4. [mixolam] instead of [mixoram] “I eat”
5. [mu:che] for [mu:rcheh] “ant”
6. [ta:lik] for [ta:rik] “dark”
7. [donjesh] for [gonjeshk] “sparrow”
8. [loya] for [roya] “name of a girl”
9. [leno] for [reno] “name of a car”
10. [ela:hi:m]/[ebla:ii:m] for [ebrahi:m] “name of a boy”
11. [teli:]/[teli:d] for [keli:d] “key”
12. [deh] for [seh] “three”
13. [bolo] for [boro] “go away” (imperative)
14. [ka:yek] for [gha:yegh] “boat”
15. [gag]/[gagi] for [sag] “dog”

A general analysis of the above utterances reveals that whatever the child actually intends to communicate via such expressions, the significant functional consequences are typically that the adult behaves as if communication is taking place. In other words, the child not only produces speech, but also receives the adults' feedback, which usually confirms that the child utterance ‘worked’ well.

By the age of two, children regularly have a vocabulary of many words (around a hundred); however, children's gradual lexical development at this stage could be noticeable in its own turn. For instance, the use of [gag]/[gagi]“dog” by some subjects in the study instead of previously-used utterance [ha:pu] for the same creature seemed an outstanding example.

In addition, at this stage the children, for the most part, might be treated as interesting entertaining conversational partners by adults and caretakers who intentionally create words to be suitable for children. Some of the example in this area are [hi:ss] “keep quiet/sleep” ;[halo:lo]/[lala:]“go to bed/ asleep”; [namnam]/[amam]/[ha:m] “food” and [?’]/[kex]/ [ax]/ [axi] “something bad/ dirty/disgusting”.

3.1.4. Telegraph to infinity

Jannedy (1994) argues that there doesn’t seem to be any ‘three-word’ sentence stage (p.276). When a child starts stringing more than two words

together, the utterances may be three, four, five words or longer. Earlier, in the study, Samsam (when he was only, say, one year or so) was reported to have produced the three-word utterance [yek-do-dah] to count! Later when he was around 2;00 he converted the utterance to [yek-do-deh] which most likely could be interpreted as [yek-do-seh] [one two three], and even later he changed it into[yek-do-deh-dah] [one two three ten], which seemed to be a telegraphic utterance. Still later, he improved it as [yek-do-seh] [one two three] when he was 2;1 years old.

Telegraphic utterances of children, which are longer than two words, have special characteristics which are more or less common in all languages. For instance, in Persian, like English, the small 'function' words such as [az] "from", [dar] "in", [beh] "to", [ruye] "on"; etc. are missing, and most of the inflections are omitted. Only the words which carry the main message (i.e. the 'content' words) occur. Children often sound as if they are reading a telegram, and that is why such utterances are called 'telegraphic speech'. However, when we refer to these sentences as telegraphic, clearly this could be just a descriptive term, since the child doesn't deliberately leave out the non-content words as does an adult sending a telegram.

At telegraphic stage of language acquisition, child's lexical improvement could be stupendously striking. For instance, many children apply more socially-acceptable forms of words instead of using the simpler *childish* ones. Two examples observed in the study were [sala:mat] for [be sala:mat] "good-bye" instead of more childish [bai bai] and [ma:shi]/[ma:shin]"car" instead of the babyish utterance [bi:b bi:b].

Further examples uttered by the subjects in the study that could better demonstrate this stage of language acquisition are as follow:

1. [ma:shi manemane] "This is my toy car" instead of [in ma:shine mane]
2. [xa:m man] "I want" instead of [mi:xam]
3. [ni:xa:m] "I don't want" instead of [nemi:xam]
4. [da:shtam na] "I didn't have" instead of [nadashtam]
5. [nata:nam] "I can not" instead of [nemitava:nam]
6. [ba:ba: hamum] "Daddy is in the bathroom" instead of [ba:ba: tu: hamumeh]
7. [sala:mat] for [be sala:mat] "good-bye"
8. [mi:mi:na tamu:m]/[mi:mi:na xodam]/[shi:shi: ni:st]"I finished milk" for [shir tamu:m shod]/[shi:r ra: xordam]
9. [nu:masha i:xam] "I'd like Coke" for [nu:shabe mixa:m]
10. [a:b dede] "Give me water" for [a:b bedeh]
11. [arahi:m ela:h] for [bism ela:h erahma:n erahi:m] " In the name of God, Most

Gracious, Most Merciful"

12. [ma:man va:] "open it for me, Mommy" instead of [ma:man va: kon]
13. [ma:ma:nam ba: ma:ma:nam] "I want to go with my Mommy" instead of [mixa:m beram ba: ma:ma:nam]
14. [ba:ba: doto(r) na] "Daddy, I don't want to go to doctor" instead of [ba:ba: doktor nemixam]
15. [a:madi:dam] for [a:madam] "I came"
16. [rafti:dam] for [raftam] "I went"

In Examples (3), (4) and (5), the child was creatively making rules for making negative verbs in different ways; in (6), (13) and (14), he/she was deleting the core word (verb), while innovatively attempting to compensate for the lack of the verb in the utterance; and in (15) and (16), the child was inadvertently overgeneralizing rules for inserting inflections. In other words, he/she was marking the pronoun incorrectly rather than inflecting the verb for appropriate person. In fact, inflection is often an indication of complexity in many languages including Persian, and the order of acquisition is mostly determined by their regularity and essentiality of convergence of meaning. This is the reason why inflections are among the last to be fully acquired in every language, and that a general uninflected main verb (or adjective) is considered all-purpose tool to start with.

When the child begins to produce utterances that are longer than two words, these utterances appear to be 'sentence-like'. They have hierarchical constituent structures similar to the syntactic structures found in the sentences produced by the adult grammar. The child shows what he/she wants to have or where to go or what to do as can in the examples above.

Another noticeable point about this stage is that the child's utterances are not simply randomly strung together words but from a very early stage, reveal his/her grasp of the principles of sentence formation. Utterance number (13), for example, is quite new and unique, since no child will hear an adult produces such an utterance, therefore, the child must have some creative, linguistic capacity, which allows for the creation of utterances like [ma:ma:nam ba: ma:ma:nam] "I want to go with my Mommy". This is supporting the theory of innate capacity given to human beings to enable them to acquire language.

During the study, a kind of assimilatory process in the children's language acquisition was also noted. This assimilatory process frequently results in mismatch between the child's form and the adult model. The examples mentioned below show children's tendencies to assimilate one segment in a word to another.

1. [cheshmesh]/[chemchem] for [keshmesh] "raisin"
2. [bebalam pa:k] instead of [bebaram pa:rk] "take me (to the) park"
3. [gu:fsand] for [gu:sfand] "sheep"

A noteworthy point is that even if the child has acquired particular sound in some words there may be certain contexts where his/her production may be altered.

3.2. Overgeneralization

Children seem to form the simplest and most general rule they can from the language input they receive and to be so 'pleased' with their 'theory' that they are to use the rule whenever they can (Fromkin and Rodman, 1993, p.379). The process of overgeneralization/overextension is common in both first and second language acquisition. In this study, overgeneralization as a strategy to form new words was observed. As an example of generalization, one of the subjects, Mohana (3;8), was observed to use [pa:t] "your foot" instead of [pa:] "foot" to refer to any person's foot/feet. The reason was that

she was exposed to the same form of utterance by her parents, and of course she was unaware of the function of pronoun [t] "your" in Persian. In fact, she overgeneralized the use of the same utterance [pa:t] not only to refer to her own foot but also to all other people's she would imagine, including all present and absent individuals.

In the process of overgeneralization, children typically form hypotheses and test them until they create the language 'rules'. Then they extend the use of grammatical rules beyond their accepted uses generally by making words or structures follow a more regular pattern. Consider the following examples uttered by some of the subjects under study:

1. [pa:t] instead of [pa:] to indicate any person's feet
2. [farda: be pa:rk rafti:m] "We went to the park tomorrow" instead of [di:ru:z be pa:rk rafti:m] "We went to the park yesterday" *or* [farda: be pa:rk mi:ravi:m] "We will go to the park tomorrow"
3. [inja: a:madi:dam] for [inja: a:madam] "I came here"
4. [rafti:dam] for [raftam] "I went"
5. [naqa:shimo neveshti:dam] for [naqa:shimo keshidam] "I drew my painting"

In (1), the child was inadvertently overgeneralizing rules for inserting personal (possessive) inflections. In (2), he/she was employing the verb/adverb incorrectly rather than using them for appropriate tense. In (3), and (4) he/she was marking the pronoun incorrectly rather than inflecting the verb for appropriate person, and finally in (5), he/she was marking both the pronoun and verb incorrectly instead of inflecting the appropriate verb for appropriate person.

The above examples illustrate how children form hypotheses and test them until they formulate the language 'rules' and construct a grammar. Foss and Hakes (1978) argued that the child is most often functioning as a 'little linguist' (P.279), and that is how the Active Construction of a Grammar Theory tries to explain child language acquisition. According to this theory, when children listen to language around them, they make hypotheses about rules for the concept they have heard. These hypotheses form their grammar. Next, children apply their hypotheses/rules in their utterances. The examples mentioned under Overgeneralization, clearly illustrate the process of hypothesis-formation on behalf of the children. Children's hypotheses are based on the few utterances they hear, so their hypotheses are sometimes wrong. When the child discovers that his utterance doesn't match the adult's, he/she finds the error and modifies it so that his/her own grammar matches that of the adult's. According to Foss and Hakes (1978), children internalize the target language rules through a 'subconscious" process (p. 123). However, believing that language ability is innate in humans, the theory states that there are restrictions imposed by the innate linguistic universals on the kinds of hypothesis children may form. All children form the same hypotheses because of these restrictions.

3.3. Creativity and innovation

A normal human being can go through life without having learned to read or write. Millions of people in the world today prove this. However, these same millions all speak and understand and can discuss complex and abstract ideas as well as literate speakers can. Thus learning a language and learning to read are somehow different. Similarly, millions of humans grow to maturity without ever having learned algebra or chemistry or how to use a typewriter. They must in some sense be taught these skills or systems, but they do not have to be taught to walk or talk. In this vein, Gleitman (1993) argues that language learning is largely "from the inside out" rather than being "outside in" (p.28).

From the beginning, universally, children creatively confront the acquisition of words and sentence meanings. For instance, one of the subjects in the present study, Sina (2;1), was observed to use [nini] for a male baby and [jiji] for a female one. Another subject, Vania (3;6) was noticed to use [tu:t farangie bozorg] "big strawberry" for [hendeva:neh] "watermelon". The above examples indicate that what may look like deformation in the children's early productions, and in their early word meanings, could actually indicate the children's linguistic creativity and competence.

Lust (2006) believes that although specific innovations in the child's first words may be "illegal" in specific contexts, denominalizations are required in general in English and across languages. Such "lexical innovation" persists to adolescence as well as adulthood. In Table 4 some examples of early creativity in lexicon are illustrated.

Table 4
Early creativity in the lexicon (Clark 1982)

Locatum verbs	**Instrument verbs**
Mummy trousers me (2;3)	You have to scale it first (2;4)
Pillow me (2;6) [in pillow fight]	Don't broom my mess (2;11)

At more advanced levels of language acquisition, we could imagine plenty of innovations on behalf of children. For instance, children employ a large number of innovative strategies to get themselves across, to make a step forward and/or to refuse to do something which is not so desirable.

The children use of speech act of refusal can provide us with a good example. My nephew, Mohammad, who is 7;2 presently, was jokingly asked by people of different ages to give them some of his yummy raisins when he was around 4;00. However, the child's diverse responses to the people's requests were of extreme interest. Here is what happened between him and other interlocutors:

Cousin (9;00): [mohamad, yekam keshmesh be man bedeh] "Mohammad, give me some raisins."

Mohammad: [xoshmaze ni:st] "That's not tasty."

Aunt (32;00): [mohamad, yekam keshmesh be man mi:di:]"Mohammad, would you give me some raisins? "

Mohammad: [zia:d ni:st] "That's not much enough."

Grandmother (60;00): [mohamad, yekam az keshmeshat be man bedeh] "Mohammad, give me some of your raisins. "
Mohammad: [bara:t xu:b ni:st] "That's not good for you."

It is almost self-evident that the child is adopting different strategies for refusing what seems undesirable to him. An interesting point is the diversity of the child's responses provided for different interlocutors, proportionate to their ages and familial/social status.

The child's involvement with ironic contexts could be of interest in its own turn, and his/her reaction(s) to the ambiguous contexts is worth studying. In one occasion, the same subject, Mohammad (being 4;6) visited me in my workroom, while I was working with my computer. He was eagerly feeling to have some fun with the computer games in my computer. However, he felt disinclined to raise the matter directly. Instead, he appealed to some woolly statements to express his intention circuitously:

Mohammad: [mibinam keh ye ka:mpioter da:ri:] "I see you've got a computer."
Uncle: [bale] "Yes."
Mohammad: [ka:mpiotere khu:bie] "Yours is a good one."
Uncle: [bad ni:st] "Not bad."
Mohammad: [faqat ba:sh na:meh mi:nevi:si:] "Do you just type with it?"
Uncle: [taqriban] "almost always."
Mohammad: [ba:zi ham da:re] "Does it have any games in it?"
Uncle: [nemi:du:nam ke chi:] "I'm not sure. So what?"
Mohammad: .....
Uncle: .....

The above examples, clearly illustrate creativity and innovation on behalf of a Persian child (around four-year-old), who was gradually developing his syntactic, semantic, and socio-cognitive skills and abilities in language.

Still, at more advanced levels of language acquisition, we could imagine plenty of morphologic creativity on behalf of children. For the most part, productive devices in this process are typically the first to be acquired. In such occasion, when there is more than one form to convey a specific meaning, the one most frequently used is acquired first and in many cases is even overgeneralized. For instance, the suffix -GAR in Persian is applied to derive agent nouns like [zargar] "goldsmith", [a:hangar], "blacksmith" and [ka:rgar] "worker". A child who has acquired this productive marker tends to apply it to words like [nanva] "baker", [baqqal]"grocer", and [barbar]"porter" which do not allow the application of -GAR (examples 1,2, and 3 below). We see the same case in English where the word "thief" pre-empts the creation of "stealer" (Clark 1981).

1. *nanva-GAR
   baker-AGENT
2. *baqqal-GAR
   grocer-AGENT

3. *barbar-GAR
porter-AGENT

In (1), (2), and (3) there is the overgeneralization of -GAR in nouns which already refer to people of three various occupations.

In other cases, we could even observe the production of genuine innovations by children by means of the suffix -GAR, and although the child's innovation seems "illegitimate" (Clark 1981) in some cases, it obeys the rule of suffixation for -GAR. In fact, this innovative agent noun is a poof that the child has mastered the –GAR marker as a separate morpheme. Moreover, he/she knows how to attach this marker to the nominal stem. In line with this logical reasoning, the child creates a new word which is unfortunately pre-empted in adult speech. The occurrence of the words [si:mgar] “electrician” and [noqregar] “silversmith” where-GAR is suffixed to a word referring to the professions via [si:mgar] and [noqrega:r] rather than to the items [barqka:r] and [noqreka:r] dealt with in the professions illustrates two more examples.

4. *simgar (one who deals with electricity)
electricity-AGENT
“electrician”

5. *noqregar (one who deals with silver)
silver-AGENT
“silversmith”

4. Discussion

It goes without saying that children do not wake up one morning with a fully formed grammar in their heads or with all rules of social and communicative interaction. Language is acquired through stages. Some linguists divide these stages into pre-linguistic and linguistic stages.

Regarding analytic style vs. gestalt style of language learning, some of the children who participated in the present study showed more tendencies toward gestalt style of language acquisition (e.g., Samsam, Atena, and Vania), while some other subjects had more tendencies toward analytic style of Persian acquisition (e.g., Sina, Behnad, and Mohana). Interestingly enough, one of the subjects (Roza) proved to have a strong tendency toward a combination of both approaches from the very beginning of her language acquisition.

Considering the findings of the present study, for the most part, naturalistic sampling like what we did in the present study is generally considered the ideal method for studying child language. However, it does have certain limitations. First, the samples could be informative about speech production, but they most often give little information about speech comprehension. Second, samples, by their very nature do not contain everything, as our samples did not, and it was the reason we preferred to study some subjects simultaneously rather than suffice to only one. The samples can easily miss some important features of a child’s linguistic ability

or may not provide enough examples of a developing language feature for the researcher to make a decision about the way a child is acquiring that feature.

The acquisition of the first language, however, indicates some similarities across children at a general cognitive level. All children cry, coo, babble, and produce words. They perceive certain phonetic distinctions categorically and use the same phonological process of reduplication, assimilation & reduction. Another innate aspect of language is the time of acquisition, which typically starts from 2 years and continues up to adolescence. Also, assuming LAD in children, it would require input to become activated. In syntax, children make progression from one word to two words, and then more words. They initially produce the same cases across languages, and reproduce the most frequent forms of the adult language, and later increase attention to less frequent constructions in language. There are also similarities in sequence among children which constitute innate language mechanism and general cognitive changes coordinated with similar real world environments. In other words, children learn a sentence construction, past tense, negation or causality only when they understand the underlying real word situation.

5. Conclusion

When children learn a language, they learn the grammar of that language, the phonological, morphological, syntactic and semantic rules. No one teaches them these rules, children seem just to 'pick them up' and in so efficient a manner as to suggest that children are apparently 'pre-programmed' to learn language. This innate capacity is a gift from God. It enables children to analyze the language of their environment and to create and refine their own grammar until they can understand and produce the full range of utterances which adults can produce.

Obviously, what impels the child to "improve" his/her speech remains largely something of a mystery. We cannot take "improve" simply to mean "bring into closer approximation to the speech of older persons around the child." The child language improvement is definitely a response to selection pressures of various kinds in which ill-formed or incomplete utterances are typically less effective than well-formed and complete utterances in accomplishing the child's intent. In this process parents probably approve of well-formed utterances and disapprove or correct the ill-formed. These ideas sound sensible and may be correct but there is still scarce evidence available to support them sturdily.

At the holophrastic stage the point was made that the child's constructions are characterized by a seemingly lawless optional omission of every sort of major constituent including subjects, objects, verbs, locatives, and so on. The point was also made that omission seldom seem to impede communication, since parents, being in the same situation and familiar with the child's stock of knowledge, understand correctly so far as one could tell, even the incomplete utterance. The implication was made that the Stage I child's speech is fairly well- adapted to his/her purposes, but as a speaker, he/she is very hardly personalized. For example, we guess that while speaking to strangers the child would have to learn to express obligatory

constituents if he/she wants to get his/her message across. The above point indicates that the selection pressures to communicate may operate chiefly *outside* our sampling situation, which is typically the child at home with family members.

In sum, we do not presently have enough evidence that there are selection pressures of any kind operating on children to impel them to bring their speech into line with adult models. It is, however, entirely possible that such pressures do operate in situations unlike the situations we have sampled, for instance, away from home or with strangers. It is also possible that one should look more closely at the small number of child utterances which turn up in most samples where the adult just does not seem to be able to make out what the child means. A radically different possibility is that children work out rules for the speech they hear, passing from levels of lesser to greater complexity, simply because the human species is programmed at a certain period in its life to operate in this fashion on linguistic input. Linguistic input would be defined by the universal properties of language. And the period of progressive rule extraction would correspond to Lenneberg's (1967) proposed "critical period." It may be chiefly adults who learn a new language in terms of selection pressures. Comparison of the kinds of errors made by adult second-language learners of English with the kinds made by child first-language learners of English could be enlightening.

The findings of this study support Clark's argument that creativity in children's speech results from the need of finding an acceptable word to fill a gap in the lexicon (1981). Moreover, as Lust (2006) puts it, children seem to rely on their creative theory construction as a compensatory tool and productive device to create new words. They generally acquire the most productive word first and then apply it:

a. in place of other less productive words that serve the same function;

b. in creating new words on the basis of rules which are not applied in adult speech either because an element different from the generally practiced one is employed, or because markers used in these creations are the least productive ones.

On the other hand, the innovations that do not conform to the adult forms indicate that children:

a. have not learned the less productive suffixes that convey the same meaning;

b. have not learned the exceptions to the rules;

c. tend to convey the message from their own perspectives and to encode the events accordingly.

In the end, it should be noted that in the present study the acquisition of Persian as a first language is investigated through the lens of creativity in the children's speech, and certainly further studies on other aspects of the acquisition of Persian as the first language can be conducted. For instance, the effects of individual differences and children's cognitive style, temperament, and social environment on their language development and creativity can be explored. In this vein, considering Vygotsky's Zone of proximal development (ZPD) theory, the role of social interaction with

caregivers, siblings, and peers influence on children's language development and creativity can also be investigated. Moreover, the role of linguistic input (e.g., frequency, complexity, diversity) which children receive, and the way(s) this input can shape their language development can be examined.

Last by not least, the findings presented in this study are by and large based on personal interpretations resulting from the analysis of the collected data from a limited number of subjects. Thus, the small sample selected in the current study should be acknowledged as a main limitation of the study. In addition, in conducting such studies as the current longitudinal observations, there is a potential room for researcher bias that has to be taken care of. In order to arrive at broader generalizations, more supporting evidence from related studies on larger population of children is needed. The results of such studies could definitely be of interest in their own turn.

References

Bloom, L. M. (1972). *Language development form and function in emerging grammar*. Cambridge: Cambridge University Press.

Brown, R. (1973). *A first language: the early stages*. Cambridge: Cambridge University Press.

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Clark, E. (1980). "Productivity and child creativity in the lexicon". Paper presented at the 22nd International Congress of Psychology, Leipzig, DDR.

Clark, E (1981). "The young word-marker: A case study of innovation in the child's lexicon". In L.R. Gleitman and E.Wanner (eds.), *Language acquisition: The state of the art.* Cambridge University Press.

Clark, E (1982). The Young Word Maker: A Case Study of Innovation in the Child's Lexicon. In E. Wanner and L. Gleitman (eds.), *Language Acquisition: The State of the Art*. Cambridge; New York: Cambridge University Press. 390–425. Reprinted in Lust and Foley (2004). 396–422.

Foss, D. and Hakes. D. (1978). *Psycholinguistic: An introduction to psychology and language*. New Jersy: Prentic-Hall.

Fromkin, V. and Rodman, R. (1993). *An introduction to language* (5th ed.). New York. Holt, Rinehart and Winston Inc.

Gleitman, L-R. (1993). A human universal: the capacity to learn a language. *Modern Philology*, *90*, S13- S33 USA.

Hopper, R. and R. J. Naremore (1978) *Children speech: a practical introduction to communication development* (2nd ed.). Harper and Row.

Jannedy, S. (1994). *Language Files* (6th ed.). Ohio State University.

Lenneberg, E. (1967). *Biological foundations of language*. New York: Wiley.

Lust, B. (2006). *Child language acquisition and growth*. Cambridge: Cambridge University Press.

MacWhinney, B. (1975). Rules, rote and analogy in morphological formations by Hungarian children. *Journal of Child Language 2*, 65,77.

Mc Neill, D. (1970). *The acquisition of language*. New York: Harper and Row.

O'Grady, W. (2005). *How children learn language*. Cambridge: Cambridge University Press.

Peters, A. (1977). Language learning strategies. *Language* 53, 560–73. 1983. *The units of language acquisition*. New York: Cambridge University Press.

Stubbs, M. (1995). Collocations and cultural connections of common words. *Linguistics and Education*, *7*, 379-390.

Appendix I

The phonological transcription used throughout the study

Consonant Sound (Persian)	Transcription (English)	Sound Description
ب	[b]	voiced bilabial stop
پ	[p]	voiceless bilabial stop
ت	[t]	voiceless alveolar stop
ط	[t]	voiceless ‘emphatic’ alveolar stop
د	[d]	voiced alveolar stop
ض	[z]	voiced ‘emphatic’ alveolar fricative
ک	[k]	voiceless velar stop
گ	[g]	voiced velar stop
ق	[q]	voiceless uvular stop
ء	[?]	glottal stop
ج	[j]	voiced palato-alveolar affricate
چ	[ch]	voiceless palato-alveolar affricate
ع	[‘]	voiced pharyngeal fricative
ف	[f]	voiceless labiodental fricative
ث	[s]	voiceless dental fricative
ذ	[z]	voiced dental fricative
ظ	[z]	voiced ‘emphatic’ dental fricative
س	[s]	voiceless alveolar fricative
ص	[s]	voiceless ‘emphatic’ alveolar fricative
ز	[z]	voiced alveolar fricative
ژ	[zh]	voiceless alveolar fricative
ش	[sh]	voiceless alveolar fricative
خ	[x]	voiceless uvular fricative
غ	[gh]	voiced uvular fricative
ح	[h]	voiceless pharyngeal fricative
ه	[h]	voiceless laryngeal fricative
ر	[r]	alveolar trill
ل	[l]	lateral alveolar
م	[m]	bilabial nasal
ن	[n]	alveolar nasal
و	[w]	bilabial approximant
ی	[y]	palatal approximate
ك	[k]	voiceless palato-alveolar
ق	[gh]	voiced velar stop