

**The Acquisition of Persian:  
Grammatically-based measures for assessing  
normal and abnormal Persian language  
development**

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## Abstract

This study presents a longitudinal analysis of three monolingual Iranian children's language development between ages 1;8-2;6, 2;2-3;2 and 2;4-3;4. The overall aims are to identify and establish the structural patterns in the acquisition of Persian, a pro-drop, inflectional and mostly verb final language. Structural patterns particular to Persian are identified in contrast to English and data drawn from the children's language progress are discussed in the light of recent theories of language acquisition. In addition, the study provides a comprehensive and systematic description of children's syntactic development in such a way as to be useful for clinical data analysis by Iranian speech and language therapists and includes some cross-linguistic comparisons with other research on language acquisition. The applicability of MLU (Mean Length of Utterance) measures to Persian is investigated and it is found that MLU measured in morphemes is most appropriate for evaluating the Iranian children's early language development up to value 4. In order to give a more detailed analysis of the children's language acquisition, the LARSP (Language Assessment Remediation and Screening Procedure) framework (Crystal, Fletcher and Garman, 1989) is adapted to Persian. Analysing Persian data with LARSP categories shows that there are many features common to both languages. Particular categories are identified. A PLARSP (Persian LARSP) profile is established based on the hypothesis that structures can be assigned to stages according to their number of elements at clause and phrase levels. The profile provides a framework for the analysis of language development in Persian and is employed in chapters 6 and 7 to set out the developmental picture of the children's language at approximately equal MLU values in the early stages, and age in the later stages. Close examination of the data points to the use of formulas by the children at early stages. Apart from the formulas, although the children show different strategies of language acquisition, the resulting distribution of categories is found to fit the data well, presenting an orderly progress down the chart according to MLU and age.

**To Reza, Bahareh and Sharareh**

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## Preface

The main purpose of my thesis is to give a thorough description of Iranian children's grammatical development. This is intended to help Iranian speech and language therapists to improve their assessment, diagnosis and treatment of Iranian children's language impairment. In order to fulfil this aim I conducted a literature search on Persian grammar. Due to the war between Iran and Iraq which began in 1980 everyone's attention was drawn away from academic studies resulting in the latest Persian grammar books being dated as early as 1979. In the United States of America, however, a few researchers (e.g. Samiiian, 1983, Karimi, 1989) have worked on Persian during this period though none of them have given a comprehensive picture of Persian grammar. Upon borrowing Windfuhr's *Persian Grammar History and State of its Study* (1979), the latest work on Persian grammar, I was surprised to find that I was the first person to have taken the book from the library since its arrival in 1980. This simple observation highlights the scarcity of research into Persian grammar. The literature sources in Persian, before 1980, concentrate on formal written Persian, no descriptions of colloquial Persian grammar can be found. The lack of literature is even more apparent in the area of Persian language acquisition. In the only study, Doroudian (1979) partially describes the Persian acquisition of her bilingual child but focuses mainly on the acquisition of English rather than Persian. As the acquisition of Persian has been little studied I decided to search for cross-linguistic studies of language acquisition (e.g. Slobin, 1986, 1992) in the hope of finding a study of Persian. However, as in the previous searches, the cross-linguistic studies have no literature or previous research on Persian grammar acquisition.

Given the lack of existing information concerning the structural aspects of colloquial Persian, I turned to Fletcher's *A child's learning of English* for inspiration. However, careful examination of Fletcher's book revealed that the methodologies he had employed to analyse the developmental patterns in the acquisition of English would not be applicable to Persian without considerable adaptation. In order to design an organised descriptive framework of Iranian children's language development it was first necessary to modify the measures, previously established in English, to meet the typological needs of Persian. This has now been successfully completed and

the initial steps of designing and adapting the English measures to Persian, based on a body of data, as well as describing Iranian children's language development have now been achieved.

Given the hope that this research will have something useful to say about the development of grammar in Persian, the first three chapters provide a background to the study in terms of a description of themes in language development studies, some information on Persian and an explanation of the subjects and methodology. Chapter 4 investigates the applicability of MLU measures, one of the most widely used yardsticks for measuring grammatical development in language acquisition, to the acquisition of Persian and gives a preliminary developmental measure for Persian. Chapter 5 describes the adaptation of LARSP, (Language Assessment Remediation and Screening Procedure) Crystal, Fletcher and Garman, 1989, to Persian. This measure is chosen as the most suitable method to be applied to the body of data. Chapter 6 presents a more detailed examination of PLARSP (Persian Language Assessment Remediation and Screening Procedure) based on MLU in morphemes. This chapter picks out the salient features in the children's samples and relates them to recent studies in language acquisition. Chapter 7 investigates and plots the children's language development on PLARSP charts according to age. Chapter 8 relates the children's data to some recent theories in child language acquisition. Appendix 1 contains a sample of data from each of the three children and represents the transcription, coding and analysis which have been carried out on the corpora. To include all the data would be impractical as it exceeds 400 pages. The data is currently being prepared for inclusion in the CHILDES database.

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# Chapter 1: Studies in child language acquisition

## 1.1 Introduction:

The purpose of this chapter is to bring together themes that have been developed in child language acquisition during the past decades to provide a background for the study presented in later chapters where salient features of the children's samples will be picked out and linked to relevant studies. This review begins with a description of four major theories in language acquisition. These four major theories are those of Piaget, Vygotsky, Skinner and Chomsky. The influence of some of the above theories has altered from one decade to another and in recent years different views in this area have emerged.

Chomsky's nativist view, his syntactic structures (1957) and his criticism of Skinner's behaviourist viewpoint (1959) caused a revolution in language acquisition research. This approach influenced researchers during the next decade. Between the mid 1960s and the mid 1970s, under the influence of Chomsky's nativist view, children's language development was conceptualised in quite different ways from traditional learning theory and the acquisition problem was defined in terms of acquiring a productive rule system or grammar. The contribution of Bloom (1970), Bowerman (1973) and Brown (1973) in this area were of particular significance.

Under the influence of Piaget's cognitive approach, the next decade saw numerous language acquisition researchers focusing less on syntax and drawing attention to semantics, pragmatics, cognition, the role of input and other issues. More recently, alternative views about child language acquisition, particularly grammar, have emerged.

One of these alternatives is a re-appraisal of the linguistic theory of Transformational Generative Grammar presented by Chomsky in a new form (Chomsky, 1981, 1986) and the re-establishment of his nativist view of how children are guided by innate linguistic knowledge.

A second alternative is a functionalist approach which is based on the claim that the child is simply able to process linguistic information by means of his superior cognitive skills (MacWhinney, 1978). However, 'detailed proposals regarding the ways in which children acquire particular target structures are inevitably subject to dispute' (Fletcher & MacWhinney, 1995:2).

On the other hand, there are researchers who take a more eclectic view and have tried to carry out a systematic description of children's grammar without wishing to commit themselves to any particular theories (e.g. Wells, 1985, Fletcher, 1985).

## **1.2 Earlier theories until the mid-1960s**

Between 1920 and 1960, four major theories predominated in child language research. These theories were those of Piaget, Vygotsky, Skinner and Chomsky.

According to Piaget's view, the development of cognition precedes that of language. Language is a source of data rather than an object of development and the child constructs an understanding of the way the world works by his own action (Piaget, 1932). Piaget assumes that the child passes through a series of stages in a fixed order to acquire language. In other words, children play an active and important role in their own development. For example, at an early stage of the child's development s/he will not search for the object when it is hidden. Later the child will search for the object and as s/he grows up this search becomes more complex and the child will look for it in different places even though the object is not visible. That is, the child gradually constructs the idea of a world of objects that exists outside himself or herself. The major stages are the sensorimotor stage (from birth to 18 months), the pre-operational stage (from 18 months to 7 years), the stage of concrete operations (from 7 years to 11 years) and the stage of formal operations (11 years and over). The cognitive approach proposed that mere exposure to language is a sufficient condition for learning, and language development is wholly determined by the child's cognitive development attained through maturation and interaction with the extra

linguistic environment. Subsequently, these attained concepts are associated with their suitable linguistic expression.

Vygotsky, on the other hand, believed that children's participation in social interaction is a primary factor in their cognitive development. That is, patterns of cognitive activity cannot be understood independently of social interactive processes (Vygotsky, 1978, 1986).

Skinner in his behaviourist approach claimed that children learn language because their vocal responses to various stimuli are selectively reinforced and shaped until they are acceptable (Skinner, 1957). In other words, children learn to produce 'correct' sentences because they are positively reinforced when they say something right and negatively reinforced when they say something wrong.\*

In contrast to Skinner, Chomsky claimed that the child is guided by innate linguistic knowledge. He proposes that the child has an ability to learn rules and produce novel grammatically-well formed sentences. The overextension of rules and the amazing speed with which language is acquired are Chomsky's justification of his nativist viewpoint (Chomsky, 1957).

Chomsky in his early view of language acquisition (1965) states that children have an innate hypothesis-making device which enables them to hypothesize the rules of the target language. Moreover, they are guided by their inbuilt knowledge of universals which gives them information about the set of possible sounds and the way the components of a grammar are related to one another. In other words, Chomsky (1965) points out that a hypothesis-making device, linguistic universals and perhaps an evaluation procedure constitute a Language Acquisition Device (LAD). Therefore, the LAD consists of basic principles which are applied to the language that the child hears around him or her.

Chomsky's criticism of Skinner for focusing on verbal behaviour without considering the role of competence and intuition in grammar

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\*Vygotsky and Skinner are mentioned only briefly as they are not discussed any further in the study.

organization (Chomsky, 1959), and his view that language consisted of two levels of representation, a deep or underlying structure that is mapped by transformation to a surface structure, influenced other researchers during the next decade.

### **1.3 Theories between the mid-1960s and the mid-1970s**

Between the mid-1960s and the mid-1970s, there appeared a number of studies about the stages of syntactic development in children. These studies acknowledged the influence of linguistic theory. That is, children's language development was conceptualised in quite different ways from traditional learning theory and the acquisition problem was defined in terms of acquiring a productive rule system or grammar.

In this period, it became clear that there were difficulties in representing the child's syntactic knowledge without taking into account his intended meaning. Both Bloom's (1970) and Bowerman's (1973) approaches introduced another level of representation, the abstract level, in child syntax. These approaches had some advantages over the pivot-grammar account (see Brain, 1963) because the pivot-open approach failed to represent the alternative meanings of the superficially similar sentences. Bowerman (1973) analysed the child's grammatical competence and pointed out that the child discovers abstract deep structures in the first place. Both Bloom (1970) and Bowerman (1973) observed that children passed through a stage (the two-word stage) that included a sample of transitive verbs such as 'throw' and 'give' needing two or three arguments. They argued that the missing elements in fact were present in deep structure and deleted by a transformational rule. Bloom also noted that in noun + noun utterances, such as 'mommy sock', the two words can express a number of different grammatical relations which will later be expressed by other syntactic devices. She claimed that the deep structure contains information that is not explicit in the surface structure. She believed that various kinds of ambiguity can occur in speech and a grammar has to represent all of the alternative meanings. For example, she considered three different meanings for *no + X* in early child language. However, all of these researchers, Bloom (1970), Bowerman (1973) and Brain (1963), found that the children in their

studies showed a consistency in placing particular words in a certain position. This subject will be discussed in chapter 8 in the light of the argument that children have a system that conforms in basic ways to the syntactic patterns of the language being learned.

Similarly, a major work in semantically-based grammar can be found in Brown (1973). Brown selected three subjects who were not at the same chronological age. He analysed their linguistic output according to the length of their utterances, both in terms of the Mean Length of Utterance (MLU) and the upper bound of longest utterance. Since Brown (1973) MLU has been widely used by researchers to measure language development in children and has been generally accepted as a yardstick for assessing grammatical development in language acquisition. Although MLU device has been oriented towards English acquisition, it has been easily adapted to languages other than English. In the present study MLU will also be employed to assess grammatical development in Iranian children. Chapter 4 gives a detailed explanation of the measure and its adaptation to Persian acquisition.

Brown (1973) selected for study fourteen of the grammatical morphemes that are absent from the speech of young children but present in abstract underlying structure that formally defines the basic grammatical relations. He investigated the acquisition order of these morphemes in terms of both their grammar and semantics. For example he argued that the contrast between morphemes 'the' or 'a' shows the distinction between specific and non-specific references. Brown (1973), like Bloom (1970), argues that there are no syntactic or morphological markers in Stage II. He called this stage 'telegraphic speech.' Brown pointed out that younger children preserve nouns, verbs, adjectives, and pronouns, but omit articles, prepositions, copula 'be' and auxiliary verbs. He described this stage as the stage of the development of grammatical morphemes and the modulation of meaning. He argued that the child's early language is a fairly short list of semantic functions, e.g. action-object, agent-object, etc.

#### 1.4 Theories between the mid-1970s and the mid-1980s

Between the mid-1970s and the mid-1980s, many researchers tried to link language acquisition, particularly rule learning, either to cognition (e.g. Piaget, 1932, Sinclair, 1971; Cromer, 1974) or to the characteristics of mother-child interaction (e.g. Snow, 1977), giving a less central role to linguistic theory. That is, there was a shift from pure grammatical research towards cognitive based research, the nature of interaction and the role of input. Pinker's theory, however, developed from a semantically-based approach. Pinker (1979, 1984) argued that the child has a prior knowledge of the basic grammatical categories (given by Universal Grammar). All the child needs to learn is which lexical items belong to which category in the particular language he is acquiring. Pinker (1984, 1989) proposed a number of semantic 'bootstrapping' mechanisms for learning the categories of particular lexical items. He claimed that children may well use distributional morphological and semantic information to identify particular lexical items belonging to particular categories, e.g. the child uses morphological information to distinguish English verbs and modals. Pinker (1984) proposed that a verb has alternate syntactic constructions, and in his new theory (1989) there is also an underlying alternation of the verb's lexico-semantic structure. He argues that some children overgeneralise these alternations, which are not arbitrary but are constrained by (mostly semantic) criteria. Children at first are not aware of the subtleties of these criteria and overgeneralise. Pinker, in his learnability model, claims that the learner adds elements to semantic structure by hypothesis testing. The child hypothesises a feature such as [+ cause] and tests it to see whether it applies to a given verb. He tests the verb by observing how it is used across situations. The learner continues testing of the feature until it conforms to the syntactic structure of the language being learnt. He believes that a careful investigation of language learnability can reveal guiding principles of mental organisation.

Under the influence of Piaget's cognitive approach, this period witnessed a cognitive reaction against previous views of language learning. Cromer (1974) in his 'pure' cognitive approach points out that for a notion to be linguistically expressed two requirements have to be

met. The child must not only have achieved the degree of cognitive maturity necessary for conceiving the notion, but he must also be able to deal with the complexity of the linguistic expression. The latter ability is also dependent on his or her cognitive development. 'Pure' cognitive researchers claim that the underlying notions are not formed by the child's experience with language, but rather by his or her experience and interaction with the environment independently of learning language. For example, at a certain stage of development the child begins to understand that there are various agents carrying out a variety of actions: there is daddy picking up the bottle and mummy handing him or her the bottle. At first s/he does not yet perceive these in terms of actions being carried out by different agents, but by the child's own experience and interaction with the environment these concepts are gradually formed.

In contrast to the cognitive theory, the linguistic input hypothesis asserts that the child's linguistic development is determined by his experience with linguistic interaction. This approach (Snow, 1972, 1986) also challenges the nativist view of language acquisition. Before 1970, it was assumed that there was a large innate component in linguistic ability and the nature of speech addressed to children made little difference to the course of acquisition (Chomsky, 1965). Chomsky pointed out that adults' speech to children included false starts, hesitations and slips of the tongue. Because this verbal input to the child is fragmented and confusing the child must have an innate ability to filter out such ill-formed input. Some researchers in support of biologically triggered behaviour pointed out that direct teaching and correction are pointless and they may even hinder a child's progress (Braine, 1971). Forcing children to imitate and correcting them repeatedly in their speech are doomed to failure (Nelson, 1973). Cazden (1972) chose two groups of children under three and half and exposed one group to intensive and deliberate expansions and the other to well-formed sentences which were not expansions. She found that the expansion group were less advanced than the other group by the end of the period of study.

To challenge Chomsky's and his supporters' nativist views, there appeared a great number of studies about the influence of input on child

language acquisition in this period. One of the major theories in this area was proposed by Snow (1972). She argued that speech addressed to children was rich and mother's speech addressed to children was characteristically fluent and intelligible. In addition, she claimed that speech addressed to children was well adapted to the children's linguistic level.

Ferguson (1977) in support of 'motherese', the term for the special style of speaking to young children, presented a three way classification of motherese, simplifying, expressive-identifying and clarifying, that might facilitate language acquisition. Simplifying process refers to reduction in complexity. The term expressive-identifying means adding affect to utterances to get the child's attention. Clarifying processes are those which add redundancy to the utterance, e.g. repetition and expansion. Similarly, Newport, Gletman and Gleitman (1977) argued that utterances addressed to children were short, highly intelligible and grammatically very well-formed. They found a high correlation between yes-no questions in maternal speech and auxiliary use in the child. Furrow, Nelson and Benedict, (1979) in a study on seven mother-child pairs experienced the same results that Newport, et.al found. 'Finetuning' in Child Directed Speech (CDS) was reviewed by Masataka (1992) who claims that infants are more likely to respond to higher pitched utterances with vocalisations and smiles. Most of the discussion of finetuning has been related to the level of syntax. In the recent work of Sokolov (1993) a perfect correlation was found between the frequency with which parents added and children deleted modals, nouns and pronouns. An up to date review of this literature is available in Gallaway and Richards (1994). The recent cross-linguistic study of the effects of language structure on children's language systems suggests that there is a great susceptibility on the part of language learners to the effects of input. It seems that 'parental input has relatively more impact on learning of the lexicon and discourse (i.e. variations in maternal style are associated with variations in child language development) than on the core features of grammatical knowledge' [i.e. children can learn core features of general knowledge with limited input] (Fletcher and MacWhinney, 1995: 6-7). However, Snow (1995) argues against the Chomskyan emphasis on the "poverty of the stimulus". Snow (1995), in

fact, claims that the universal strategies that were once presumed to drive language acquisition have been very hard to find across languages. Since the 'motherese' structural and interactional style addressed to children differs from adult to adult speech (see Howe, 1981) and many researchers have found that the mother's utterances have some effects on the child's course of development investigation in this area seems worth pursuing. For example, Gleitman, Newport and Gleitman (1984) argued that if the auxiliaries are used in the initial position, uncontracted and stressed, the child will get enough information to construct them. This strong argument in English acquisition cannot be justified in languages like Persian where auxiliaries are not used in initial position and uncontracted. The detail justification of this hypothesis in Persian based on Iranian children's data will be discussed in chapter 8.

### **1.5 Current theories of child language research**

In recent years most attention has been paid to the acquisition of grammar. In part, because the well-known studies of child language have dealt with this topic. Moreover, the central debates in language acquisition (e.g. stages of language development, cross-linguistic studies of language acquisition, language development, language specificity, cognition, the role of input, etc.) are usually exemplified by aspects of grammar acquisition. The attention to grammar in language acquisition research has resulted in alternative views regarding child syntax development.

One alternative is the revival of generative grammar in a new form presented by Chomsky as the Principles and Parameters Theory (Chomsky, 1981, 1986). According to this view, much of the structure of language is universal and innate. The verbal input to the child is degenerate and impoverished. The child uses linguistic input only to set or 'trigger' parameters in his innately provided grammar. The Theory of Parameters was first presented in Chomsky's lectures on Government Binding Theory in 1981. In this theory, Chomsky's early view of the LAD has disappeared. Chomsky now believes that children's Universal Grammar (UG) is pre-wired with a number of constrained options or parameters. When children select their language, they know through

pre-wired knowledge how the language works. That is, in Chomsky's new theory children are equipped with a parameter-setting mechanism instead of simply a hypothesis-making device. In other words, UG, in Chomsky's later view, is not only innate but plays a more extensive role than before. It has a limited set of switches or parameters with a finite number of options or values. In order for this system to function, experience is needed to fix the switches. Chomsky calls the learnability problem a logical problem of language acquisition. For example, it is logical to assume that the child learns word-order on the basis of exposure to particular languages (see Atkinson, 1992 and Meisel, 1995 for review).

Chomsky suggests that children may know in advance that language contains 'heads' (key words). They then discover the position of the subsidiary words or modifiers (see Aitchison, 1992 and Meisel, 1995 for review). Meisel (1995) in his description of this approach states that children set values on each of the parameters that correspond to those of the native language requirement. Only those aspects of languages which are varied across languages are determined through parameters. The universal aspects are guided by the child's innate linguistic knowledge. He also points out that the general syntactic structure differs cross-linguistically. That is, the position of the head may appear to the right or to the left of its complement. Manzini and Wexler (1987) discuss multivalued parameters. However, most parameters offered suggest a choice between only two values. For example, Goodluck (1986,1991), in support of Chomsky's view of early grammar, claims that the child's selection of pivot-open or open-pivot structure (see Braine, 1963) shows that the target language s/he is learning is right-branching or left-branching. She argues that the basic distinction in branching structure is quickly incorporated into the child's grammar system. The studies by Lust (1983, 1986) are also consistent with the notion of 'switch setting' with regard to the 'principle branching direction' of language. Another important aspect of parameters which is not apparent from the position of the head is the setting of a single parameter value by a number of unrelated surface syntactic phenomena in a language (see Chomsky, 1981: 6). Most discussion of Principles and Parameters Theory is shown by means of the "null subject" or "pro-drop" parameter. According to

this hypothesis the omission of subjects is allowed for in languages with particular syntactic features. For example, null subjects are allowed for in pro-drop languages with the inflectional system of the verb agreeing with the subject or the null subject. Pro-drop languages do not have the empty elements to fill the subject position, such as English 'it' and 'there'. Hyams (1986, 1992, 1993) provides major studies of grammatical development in children within this framework. She explores cross-linguistically the implications of the idea that grammar acquisition involves the child in setting the parameters of UG. She argues, for example, that the null subject parameter is initially set on the null subject value for all languages. Some aspects of Principles and Parameters theory (Chomsky, 1986) will be tested against Persian data. This discussion will be followed in chapter 8. Furthermore, Atkinson (1992) in support of Chomsky's viewpoint has presented a description of children's syntax within the Principles and Parameters framework. Generally, Chomsky's view of the nature of UG and its role in language learning stands in opposition to views of learning that rely on very general mechanisms for learning with the presumption of little or no innate knowledge of particulars of linguistic systems.

A second alternative view proposes that there are cognitive, semantic and functional bases to syntax (MacWhinney, 1978, Bates & MacWhinney, 1982, 1987, 1989). Thus the child needs little innate knowledge because syntax derives from the child's cognitive abilities and his linguistic environment. In other words, the child is simply able to process linguistic information by means of his superior cognitive skills. Bates and MacWhinney's Competition Model is the natural successor to Slobin's 'operating principles'. The processing approach, pioneered by Dan Slobin (1973), proposed that children use a set of 'operating principles' for processing language, such as 'pay attention to the ends of words' and 'pay attention to the order of words'. Bates and MacWhinney in their Competition Model propose that underlying language must compete for the small number of possible surface representations. In this approach, meaning guides the child in the acquisition of grammar and children appear to have access to the concepts of object, action and process which characterise nouns and verbs. The ability to distinguish objects from actions is fundamental to cognition. As was noted before,

Brown (1973) like Bates and MacWhinney, argues that the child usually develops an interest in the concept expressed by a word before actually acquiring that word. The role of grammar in this view is to provide the child with a way of knowing what goes with what. There are no rules to be learned and the role of the environment as feedback to the learner is important for learning to occur. That is, the bases of a child's grammar are present in adult grammar. Generally, according to this approach the child processes language by his or her own general cognitive abilities rather than through a universal innate language acquisition device. Therefore, a range of different processes may be employed either by individuals, by different languages or they may change with age. Bates, Dale & Thal in support of this approach point out 'the relationship of language to nonverbal cognition, and the role of environmental variables, have found it essential to focus on variation' (1995:96). Bates et al. in fact, present some of the most recent techniques for studying individual differences and arguing against innate views of language development. They discuss the contrast between analytic and holistic learning styles as well as variability between comprehension, production and the use of word combinations among children. They found great differences in the rate of development from first word to grammar in the children under their study and concluded that any theory would have to account for variations that are observed in early language learning.

On the other hand, there are a number of researchers who have tried to carry out a systematic description of the various features of syntactic development in children without having to commit themselves to any of the above theories, (e.g. Wells, 1985, Fletcher, 1985). Wells (1985), in his massive Bristol project, gives information on a wide range of topics under the general categories of functional semantics and syntactic development. This project was carried out with a large group of children and Wells and his collaborators collected rich data obtained from a large group of children's utterances as Brown (1973) did for a small number of children. Wells' coding of his data was carried out at a number of levels under semantic, syntactic and functional categories. The important contribution of Wells's data is a descriptive one. His main aim was to understand the sequence of language development for both theoretical as well as pragmatic purposes. He investigated the order of emergence of

each category very carefully. His contribution concerning the sequences of emergence of any pair of linguistic items can be used to assess order of emergence in other languages. Generally, Wells's project has many valuable findings which could provide bases for many future studies.

A similar theory-neutral approach is adapted by Fletcher (1985) who describes how a child learns his native language, referring to various theories of language acquisition developed over the previous two decades. Fletcher transcribed one child's utterances in conversation when aged between 2;6 and 4 years and made sense of the mass of data of the child's performance over time by linking them to relevant studies. Fletcher used the Language Assessment and Remediation Screening Procedure (henceforth, LARSP) framework (Crystal, Fletcher, Garman, 1989) to summarise the grammatical information contained in each stage of the child's language development. In addition, he used MLU (Mean Length of Utterances) (see Brown, 1973) as an index of the child's grammatical development.

The most recent growing theories in child language have been discussed in Perera, Collis and Richards, (1994) and Fletcher and MacWhinney, (1995). Some of the themes which are debated and have been developed since 1970 up to the present time are: the role of input (e.g. Shatz, Hoff-Ginsberg and MacIver, 1989, Richards and Robinson, 1993 and Snow, 1995); individual differences in the course of language development (e.g. Nelson, 1981; Lieven, Pine & Dresner Barnes, 1992, Bates, Dale and Thal, 1995); the descriptive studies of the world's languages (e.g. Korean: Clancy, 1989; Tamil: Vaidyanathan, 1991; Turkish: Aksu-Koç, 1988; Warlpiri: Bavin and Shopen, 1985; and Slobin, 1985 (Vol.I) and 1992 for studies of some 20 languages); and finally, cross-linguistic studies which particularly argue for comparisons and contrasts in the acquisition of languages (e.g. Slobin, 1985 (Vol.II); MacWhinney & Bates, 1989; Weist, Wysocka & Lyytinen, 1991). For example, researchers have found that the passive is a late acquisition in Indo-European languages (e.g. Maratsos, Kuczaj, Fox & Chalkley, 1979) while this structure shows relatively early acquisition in non-Indo-European languages (Demuth, 1990). The cross-linguistic studies are important because of their theoretical value. They will also help to

prevent confining the studies of language acquisition to major languages. It is clear that normally developing children have the ability to acquire any of the world's languages, regardless of their typology. Therefore, any theory of child language acquisition must be able to account for all developmental patterns that researchers identify (Perera et al., 1994). Currently, cross linguistic studies of child language have begun to identify the universals from language specific categories.

Concerning the methodological advances, the establishment of the CHILDES database and its computer coding system for child language data, has resulted in having access to an invaluable source of corpora which have been collected by researchers around the world (MacWhinney, 1991, 1995).

As far as the theoretical issues are concerned, some theories, such as the parameter setting theory (Chomsky, 1981, 1986 and Hyams, 1993), the semantic boot-strapping hypothesis (e.g. Pinker, 1984, 1989), and cognitive/information processing theory (Bloom, 1990 and Valian, 1991), have been among those highly productive theories flowing from both linguistics and psychology. However, the central question in child language acquisition which still remains unanswered and needs more investigation in spite of all the progress that has been made is: how much and what kind of linguistic knowledge is innate? It would be important for researchers to find the similarities in the acquisition of different languages to throw new light on linguistic innateness and universality (Perera et al., 1994).

The overall aims of this thesis are: a) to describe the general structural patterns in the acquisition of Persian, b) to identify the structural patterns particular to Persian in contrast to English and c) to give a comprehensive and orderly assessment of children's syntactic development to serve as a guide for Iranian speech and language therapists. Because of this, and also because this is the first time (as far as I am aware) that a detailed account of language acquisition in Persian has been attempted, a descriptive approach such as that adapted by Wells and Fletcher was deemed most appropriate for the present study. Such an approach provides data which can then be used to assess particular

theories. For example, researchers in child language acquisition have recently drawn attention to pro-drop languages, like Persian, to argue pros and cons for parameter-setting theory (Chomsky, 1981, 1986; Goodluck, 1991; Lust, 1983, 1986; Hyams, 1992, 1993). Chapter 8 of this study compares this theory with cognitive/information processing views (Bloom, L. 1970; Bloom, P. 1990; Valian, 1990, 1991).

This study has very little to say about phonology, derivational morphology and semantics. 'Each area is rich in its own right, but syntax is of central importance in linguistics and as a defining quality of human language.' (de Villiers and de Villiers, 1985: 28).

## Chapter 2 Some Information on Persian

### 2.1 Background information on Persian

The language analysed in this study is modern colloquial Persian. Modern Persian is spoken as a first language in Iran, Afghanistan, Tajikistan and to some extent in Pakistan and India. In Iran, Persian, which is called Farsi, is spoken by half of the population of this country.

Modern Persian is a member of the Indo-Iranian language group which belongs to the Indo-European family. This language has a 'rudimentary' inflectional system (Winfuhr, 1979) and many morphological distinctions in other languages, such as German, are more extensive than those in Persian, e.g. gender, plurals.

The Modern Persian which has developed out of Middle Persian was first studied in the 11th century by Iranians, who were later joined by western scholars in the 17th century. The classical scholars of Persian grammar have described it as two main paradigms: the 'Muslim/Near Eastern' (mostly based on the Arabic model) and the 'Western' (mostly based on the Latin model) paradigms. Neither of these models offered important insights for comparative linguistic theory (Windfuhr, 1979).

Generally, three periods of research on Persian can be recognised: the traditionalist, the structuralist and the generative. Windfuhr's (1979) book covers almost all linguistic scholarship on Persian since its beginning in the 17th century until 1976. This book comprehensively researches the state and history of Persian and provides a detailed survey of some major analyses done in particular areas of Persian grammar. The objective of the book is to provide 'a critical, quite selective, though substantial, survey of the major achievements in the analysis, description, and interpretation of the linguistic data' till 1976 (Windfuhr's 1979: 5). Apart from this book, there are no current Persian sources to give sufficient information about the varieties of structural patterns in this language.

Most early research on Persian syntax was done by western scholars who usually dealt with the literary and classical language and used the written texts for purposes of linguistic analysis. The first traditional grammar of Persian was published in 1771 by Sir William Jones and was based on a Latin model. Most western linguists emphasised the comparative diachronic development of Persian grammar. Vullers (1870) was one of these scholars who took such an approach while Horn's (1893) study was purely historical and Jensen's (1931) approach was to some extent historical and partially descriptive. Phillotts' *Higher Persian Grammar* in 1919 was the first grammar to include some notes on colloquial Persian and make a distinction between colloquial and formal Persian.

By the mid-20th century, with the development of structuralist linguistics, the focus of research changed from historical work to description of educated standard Persian. Iranian scholars as well as their western colleagues wrote grammars that represent the structuralist approach. That is, the use of old documents and dictionaries as an origin of linguistic data was replaced by living sources. Bateni's *Saxteman-e zaban-e farsi* in 1970 and Lazard's *Grammaire du Persan Contemporain* in 1975 show a structural orientation. Bateni, in fact, presented the basic constituents of Persian grammar, sentence, clause, phrase and word, and the function slots and the categories which can fill them.

Similarly, both European and Persian grammarians have published a few studies during the generative period. Most of the work done in this period follows the "Aspects" Model of Chomsky (1965) and rests heavily on doctoral dissertations or equivalents. For example, Soheili Esfehiani's (1976) survey represents this model. Moyne's (1970) dissertation is based on the late-60s version of transformational grammar. He proposed a good number of syntactic surface-deep structure problems of Persian such as the compound verbs and passive. Palmer's doctoral dissertation (1971) is based on Fillmore's case grammar in this period and Farrokhpour's (1979) doctoral dissertation follows the assumptions of

generative semantics. Bashiri (1972) also developed his own model of grammar within the basic frame work of generative semantics. He discussed general linguistic problems rather than problems of Persian even though his study was on this language.

Most recently, Dabir Moghadam (1982, 1995), Samiiian (1983) and Karimi (1989) consider modern spoken Persian. However, none of these scholars give a general picture of Persian grammar. They have analysed a single topic or section of the grammar. Thus, the present study is, in fact, the first attempt to describe the acquisition and study of Persian grammar in general and analyse the utterances in context according to their function. For example, N + N in one context would be possessed-possessor and in the other Vocative + N (See Chapter 3 for more explanation).

## 2.2 Some salient features of Persian grammar

The objective of this section is to familiarise the readers with some specific features of Persian grammar which are employed but not discussed fully throughout the study. These include, word order, nouns and noun phrases, definite and indefinite nouns, the genitive markers, *ezafe* and *ma:l*, pronouns, verbs, negation and questions and some features of Persian grammar in contrast to English.

### 2.2.1 Word order

According to Greenberg's (1963) classification, Persian seems to be a type III language. Type III languages are typically verb-final in which the genitive case precedes the head noun and adjectives also precede the modified head noun.

Studies by traditional grammarians as well as recent studies have considered Modern Persian to be a verb-final language. Forougy (1944) suggests the following word order for Persian: Subject- Attributive-Direct Object- Indirect Object- V. Boyle (1966) also asserts that Modern Persian is an SOV language. However, he suggests two exceptions in terms of the final position of the verb in this language: a) Adverbial

phrases may be placed after the verb. b) An attributive adjective may follow the verb. It should be borne in mind that the language described by all of these scholars is the written language which differs from the spoken language, particularly in the case of the word order.

Concerning the spoken language, Farrokhpey (1979), Dabir-Moghaddam (1982) and Samiiian (1983) consider Persian as a verb-final language. Dabir-Moghaddam (1982) argues for a rather restricted verb final while Soheili-Isfahani (1976) has noticed a VSO pattern in addition to the basic SOV order.

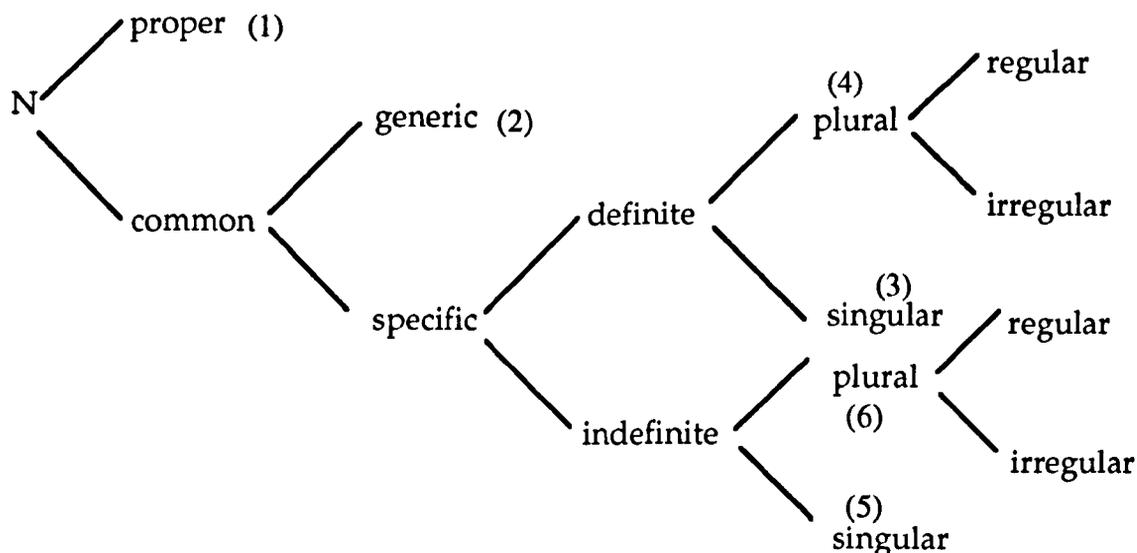
A more recent study by Karimi, (1989) also suggests that Persian is a verb-final language. However, she argues that phrasal arguments may occur post-verbally and the auxiliaries *bud-an* 'to be' and *shod-an* 'to become' have post-verbal positions. Thus, Karimi claims that Persian is not a rigid type III language. She suggests that the most usual word order in Persian is (S) (PP) (O) VI where S=Subject, PP= Prepositional Phrase, O=Object, V=Verb and I=Inflection. Parentheses indicate options.

In this study, following the most recent studies, Persian is considered primarily a verb final language. In addition, it is considered a 'pro drop' language with sentences in which pronominal subjects are missing. The subjects appear only as verb suffixes in these sentences, e.g. *raft-am* (went-I) 'I went'. Some of the prepositional phrases, according to their functions in the utterances, e.g. *be-de be man* (imp-give to me) 'give to me'], which is indirect object can also be considered as adverbials as Quirk, Greenbaum, Leech and Svartik (1985) suggested for English and Ball (1988) did for Welsh.

### 2.2.2 Nouns and Noun Phrases

The simple noun phrase in Persian in terms of its minimal number of morphemes has: the plural marker *ha:/a:* , the definite marker, *e* , indefinite marker, *i* , some prepositions, the object marker, *ro/o* and the demonstratives *in* 'this' and *a:n* 'that. Some of these morphemes will be explained in this part and some of them through the study as necessary.

According to Bateni (1970 b), nouns in Persian fall into the following classes:



Bateni gives the following examples for each above noun category as follows:

(1) Proper noun: *tehran pa:yetaxt-e ira:n ast* (No marker)  
 (Tehran capital-ezafé Iran is)  
 'Tehran is the capital of Iran'

(2) Common generic: singular *bache ba:zi mi-kon-ad* (No marker)  
 (child play pres-does-s/he)  
 'child plays'  
 plural *bache-ha: ba:zi mi-kon-and*  
 (child-pl play pres-do-they)  
 'children play'

(3) Common specific definite singular: *keta:b pa:re ast* (No marker)  
 (the book ripped is)

'book is ripped'

*a:n keta:b pa:re ast* (marker *a:n*)

(that book ripped is)

'that book is ripped'

(4) plural: *keta:b-ha: pa:re ast* (No marker)

(the book-pl ripped is)

'books are ripped'

*a:n keta:b-ha: pa:re ast* (marker *a:n*)

(that book-pl ripped is)

'those books are ripped'

(5) Common specific indefinite singular:

*yek keta:b-i nevesht* (*yek* -singular-*i*)

(one book-indefinite marker wrote)

's/he wrote a book'

*yek keta:b nevesht* (*yek* singular)

*keta:b-i nevesht*

(book-*i* wrote) (singular-*i*)

's/he wrote a book'

(6) Common specific indefinite plural:

*chand keta:b nevesht-e ast* (marker *chand*)

(some book wrote-past part aux)

's/he has written some books'

*keta:b-ha:-ei nevesht-e ast* (plural-*ei* marker)

(book-pl-indefinite marker wrote-past part aux)

's/he has written some books'

As illustrated above, all nouns in Persian are assumed to be countable and the subdivision of nouns to countable and uncountable nouns does not exist for this language. Hence, since there is no distinction between countable and mass nouns in Persian, the suffix (*ha:*) marks plurality in both classes. Furthermore, there are a few Arabic words in Persian which have caused some irregular plural nouns to form. These words are used in formal written Persian. The plural mark for subjects with [+human] feature is obligatory and copied into the verb while for other subjects is not. Bateni (1976; 125) gives a good survey-chart for the nouns in contemporary Persian. All of the above examples

are given in formal spoken Persian. For example, in No. 3 the suffix *-e* is sometimes used as definite marker in colloquial Persian which is not mentioned in Bateni's book. In addition, he has not subdivided the proper and generic nouns into singular and plural forms. However, he has given some examples for generic nouns in both singular and plural forms.

### 2.2.3 Definite and Indefinite Nouns

Generic and specific definite nouns are not marked as such in Persian. All Persian nouns are identified as definite except when marked with indefinite suffix 'i'. Bateni (1970 b) presents the following table for Persian definite and indefinite nouns:

P=plural	S=singular	0=zero = definite marker	
			generic ( 0 + S)
			definite ( 0 + S ; 0 + P)      rarely ( <i>an</i> + P/S ; S + <i>e</i> )
			indefinite ( S/P + <i>i</i> ; <i>yek</i> + S + <i>i</i> )

As seen above, there is usually no definite marker in Persian.

### 2.2.4 *ezafe*

One of the common construction of non-verbal categories in Persian is *ezafe*, which literally means "addition", specified by the occurrence of a morpheme *e* before the phrasal complement and modifier following the head. The *ezafe* construction occurs in all non-verbal phrase categories: the adjective phrase, the noun phrase and the prepositional phrase. Modifiers in Persian follow their head nouns and *ezafe* is placed between modifier and the head noun, e.g. *pesar e xub* ( boy *ezafe* good) 'the good boy.' Similarly, the genitive construction in Persian has the same order as modifiers, e.g. *keta:b e pesar* (book *ezafe* boy) 'the boy's book.' *ezafe* is also used in forming the prepositional phrases e.g. *zir e a:b* (under *ezafe* water) 'under the water.'

### 2.2.5 *ma:l*

*ma:l* 'the property of' is followed by the genitive noun phrase and pronouns to express possession e.g. *ma:l e hassan* ( the property *ezafe* hassan) 'the property of Hassan' and *ma:l e man* (the property *ezafe* me) 'mine'.

### 2.2.6 Pronouns

Persian pronouns have neither gender distinctions nor different grammatical forms. That is, Persian subject, object and possessive pronouns are the same. The table below shows the Persian pronouns in informal colloquial Persian:

	singular	plural
1st person	<i>man</i>	<i>ma:</i>
2nd person	<i>to</i>	<i>shoma:</i>
3rd person	<i>oun</i>	<i>ouna:</i>

However, the subject pronouns in the form of inflections are different from their object and possessive counterparts. These inflection are attached to verbs as well as to adjectives, nouns and pronouns. The table below illustrates the subjects in the form of inflection.

Subjects in the form of inflection in informal colloquial Persian

	Singular	Plural
1st person	<i>-am</i>	<i>-im</i>
2nd person	<i>-i</i>	<i>-id</i>
3rd person	<i>-e</i>	<i>-an</i>

Objects and possessives in the form of inflection:

1st person	<i>-am</i>	<i>-mun</i>
2nd person	<i>-et/-t/at</i>	<i>-tun</i>
3rd person	<i>-esh/ash</i>	<i>-eshun</i>

Object inflections either appear as a verb suffix in the third person singular, past tense, e.g. *gerft-mun* (caught-us) 's/he caught us) or they are used after the subject inflections. e.g. *gerft-am-et* (caught-I-you) 'I caught you'. On the other hand, possessives in the form of inflections are attached to nouns, e.g. *ota:q-am* (room-my) 'my room'.

### 2.2.7 Verbs

Most researchers agree that there are two independent roots of the present and past as the basic forms for the formation of all verbal categories in Modern Persian. By attaching *-an* to the past root the infinitives are formed. However, infinitives as well as bare roots are rarely used in Persian. For example, the present root always appears with the prefix *mi-* or *be-/bi-/biy-* and the past root is always formed with the inflections except that which does not have any specific endings for the third person singular. The table below illustrates the infinitive, past root, present root, present and past tense of the verb *xord-an* 'to eat'

infinitive		past root		present root
<i>xord-an</i>		<i>xord</i>		<i>xor</i>
'to eat'		'ate'		'eat'
present tense				
<i>mi-xor-am</i>	(pres-eat-I) 'I eat'	<i>mi-xor-im</i>	(pres-eat-we) 'we eat'	
<i>mi-xor-i</i>	(pres-eat-you) 'you eat'	<i>mi-xor-id</i>	(pres-eat-you) 'you eat'	
<i>mi-xor-e</i>	(pres-eat-he) 's/he/it eats'	<i>mi-xor-an</i>	(pres-eat-they) 'they eat'	
past tense				
<i>xord-am</i>	(ate-I) 'I ate'	<i>xord-im</i>	(ate-we) 'we ate'	
<i>xord-i</i>	(ate-you) 'you ate'	<i>xord-id</i>	(ate-you) 'you ate'	
<i>xord</i>	(ate-he) 's/he/it ate'	<i>xord-an</i>	(ate-they) 'they ate'	

Some researchers, e.g. Bateni (1970 a), believe that Persian has only a present root. Bateni (1970 a) believes that the past root is formed by adding one of the suffixes, *t, d, id, a:d* to the present root. Since many of Persian verbs do not follow the above rule, e.g. the present root *suz* 'burn' has *suxt* as the past root, Bateni has given a list for irregular verbs in Persian. However, most reserchers agree that Persian has two verb roots and this approach is taught in Iranian schools. Hence, this study favours this approach and considers two verb roots for Persian. It is clear that this area needs more study and investigation.

In addition, the majority of Persian verbs are in the form of compound verbs consisting mostly of Adj + Verb and N + Verb, e.g. *sohbat kard-an* (speech do) 'to speak'.

According to Mirhassani (1989) the verb *bud-an* 'to be', like all the other verbs, is regular with present roots *ba:sh* and *hast* and past root *bud* (see Mirhassani, 1989 for details). The regularity of the verb *bud-an* that Mirhassani argues is in contrast to English. In English the verb 'to be' has three different forms for the present tense, *am, is* and *are*, and two forms for the past tense, *was* and *were*, while in Persian this verb is used like other verbs. The following examples show how the verb *budan* is used in the present and past tenses in Persian:

Present tense: *hast-am, hast-i, hast, hast-im, hast-id hast-an* (am-I, are-you, is-s/he, are-we, are-you, are-they) 'I am, you are, s/he is, we are, you are, they are'

Past tense: *bud-am, bud-i, bud, bud-im, bud-id bud-an* (was-I, were-you, was-s/he, were-we, were-you, were-they) 'I was, you were, s/he was, we were, you were, they were)

As is seen above, Mirhassani's view of the verb 'to be' as a regular verb is in contrast to English. However, he has not mentioned anything about the present copula in the form of inflections. In addition, he has introduced two present roots for *bud-an* which are not common for other Persian verbs. The present copula *bud-an* 'to be' in the form of inflections is formed by attaching the person suffixes to adjectives,

nouns, pronouns, e.g. *sard-e* (cold-is) 'it is cold', *da:neshju-am* (student-am) 'I am a student', *ma:-im* (we-are)'we are'. Moreover, the negative form of the present form of the verb, *hast* is *ni-st* which is different from other regular verbs in Persian (see 2.2.8 below). In this study *ni* in *nist* has been taken as a negative prefix. It should be borne in mind that subject + complement, e.g. *Mahdi bad* 'Mahdi bad', is not a grammatically correct sentence and such sentences cannot appear without subject inflections in Persian, e.g. the correct structure for the above utterance is *Mahdi bad-e* (Mahdi bad-is) 'Mahdi is bad' and the negative form appears with the copula, e.g. *Mahdi bad ni-st* (Mahdi bad neg-is) 'Mahdi is not bad'. Therefore, it seems plausible to consider the person suffixes as copula in these structures. This category is explained in detail in Chapter 5.

### 2.2.8 Negation and questions

In Persian the prefix *na* or *ne* is attached to the beginning of main verbs or modal auxiliaries to indicate negation. The only way of forming yes/no questions in the language is to change the intonation of affirmative sentences. WH questions, also use rising intonation. The examples are given in 2.2.12.

### 2.2.9 Object marker *o/ro*

The suffix *o/ro* is usually added to an object in a sentence in Persian. *o/ro* are allophones of the same phoneme. e.g. *Hassan-o did-am* (Hassan-Omarker saw-I) 'I saw Hassan', *shoma:-ro da?vat kard-an* (you-Omarker invite did-they) 'they have invited you'.

### 2.2.10 Past participle *-e*

The prefix *-e* is added to the past root and forms the past participle of the verb. An auxiliary usually follows the past participle form of the verb, e.g. *nevesht-e bud* (wrote-PP aux) 's/he had written'.

### 2.2.11 Auxiliaries and Modal auxiliaries

There is no clear investigation about auxiliaries and modal auxiliaries in Persian and this area needs more research. The only recent research in this area belongs to Farrokhpey (1979). It seems that since Persian, like Italian, is a pro-drop language auxiliaries and modal auxiliaries play the same role as main verbs and receive the same inflections. Hyams (1992) believes that Italian modals function morphologically and syntactically like main verbs and can not be generated under auxiliaries. However, Farrokhpey (1979) suggests three auxiliaries, *bud-an* 'to be', e.g. *raft-e bud* (went-PP aux) 's/he has gone' *shod-an* 'to become', e.g. *bast-e shod* (closed-PP become) 'it was closed' and *xa:st-an* 'to want', e.g. *xa:had raft* (aux went) 's/he will go' (this form is rarely used in colloquial Persian) and *mi-xa:-m be-r-am* (pres-want-I subj-go-I) 'I want to go' for Persian. However, the latter form mostly satisfies the criteria for modal auxiliaries rather than auxiliaries. In this study both forms are regarded as auxiliaries. Farrokhpey also suggests three modals, *momken bud-an* 'may' = colloquial *mishe*, e.g. *mishe be-r-am* (modal auxiliary subj-go-I) 'may I go', *tava:nest-an* 'can', e.g. *mi-tun-am be-nevis-am* (pres-can-I subj-write-I) 'I can write' and *ba:yest-an* (must), e.g. *ba:yad be-r-e* (must subj-go-s/he) 's/he must go'. As is seen in the examples, the main verbs which follow modal auxiliaries have subjunctive forms. The structure of subjunctive verbs in Persian is *be-/bo-/biy-* + Present root + person and number inflection. The prefix *be-/bo-/biy-* with the present root is also used to express command in this language, e.g. *bo-ro* 'go'. In addition, Winfuhr (1979) has noticed an 'aspectual auxiliary' in Persian. *da:r* 'have' with three imperfective forms (*da:r* 'have', *da:sht* 'had' and *da:sht-e* 'has had' is used to express progressive in Persian. This auxiliary precedes the main verb and takes the same inflections that the main verb has. However, in contrast to modal auxiliaries, it does not bear any prefixes, e.g. *da:r-e shena: mi-kon-e* (have s/he swim pres-do-s/he) 's/he is swimming'. Marashi (1970, 1972) gives the general grammatical properties of the modals as distinct from aspectual auxiliaries and auxiliaries. He noted that: 1. modals can be paraphrased, e.g. *ba:yad be-*

*r-e = la:zem ast be-r-e* (must subj-go-s/he) 's/he must go' (nessessary is subj-go-s/he) 'it is necessary for him or her to go', 2. they allow for the ellipsis of the dependent verb, e.g. *mi-tun-e be-r-e to ham mi-tun-i* (pres-can-s/he subj-go-s/he) 'you too pres-can-you) 's/he can go, you can, too', 3. they admit for the insertion of *ke* 'that', e.g. *ba:yad ke be-ya:i* (must that subj-come-you) 'you must come', 4. they allow subordinate subjunctives, e.g. *ba:yad be-r-am* (must subj-go-I) 'I must go', 5. negation can occur with the modal and the subordinate verb, *ne-mi-tun-e be-r-e* (neg-pres-can-s/he subj-go-s/he) or *mi-tun-e na-r-e* (pres-can-s/he neg-go-s/he) 's/he cannot go'.

The above grammatical categories will be discussed further through the study.

### 2.2.12 Some features of Persian grammar in contrast to English

In some ways Persian is morphologically less complex than English yet in other ways is more complex. For example, unlike English, Persian is a pro-drop language with a rich verbal inflection system. Generally, Persian is more richly inflected than English and most modals and auxiliaries are treated like main verbs and take verbal inflections. Furthermore, as explained above, most verbs appear in compound forms in this language. Interrogatives and negatives, on the other hand, are not marked. That is, in Persian the only way of constructing yes/no questions is to change the intonation of declarative sentences. If there is a WH question the WH marker (WH words can be called K-words in Persian since the question words in this language begin either with *ch* or *k*) will be added to Persian declarative sentences accompanied by rising intonation e.g.

Persian: *unja: mi-r-i*  
(there pres-come-you)

English: 'Are you going there?'

Persian: *koja: mi-r-e?*  
(where pres-go-he/she)

English: 'Where is he going?'

Secondly, in Persian the prefixes *na* or *ne* are attached to the beginning of main verbs or modal auxiliaries to express negation while in English negation is shown by putting 'not' after modals and auxiliaries and before the main verbs. e.g.

Persian: *ne-mi-r-e* (main verb)  
(neg-pres-go-he)

English: 'He does not go.'

Persian: *ne-mi-xa-d be-r-e* (auxiliary) + (main verb)  
(neg-pres-want-he subj-go-he)

English: 'He doesn't want to go'.

In addition, the Persian does not distinguish between present, present progressive and future, as in English, and owes a single present tense form, e.g. :

Persian: *koja: mi-r-i?* (present tense)  
(where pres- go-you)

English: 'Where are you go-ing?' (present progressive)

(the following examples are selected from the Quirk, Greenbaum, leech and Svartik (1985) grammar)

Persian: *farda na:me mi-res-e* (present tense)  
(tomorrow letter pres-arrive-it)

English: 'The letter will arrive tomorrow.' (future)

Persian: *bezudi mi-bin-am-et* (present tense)  
(soon pres- see-I-you)

English: 'I will be seeing you soon'. will/shall + the progressive

Furthermore, the Persian makes no distinction between past and present perfect, as in English, and uses a single past tense form - e.g. :

Persian: *pira:han-am-o xara:b kard-i.*

dress my-obj marker ruin-did-you

English 'You have ruin-ed my dress' / 'You ruined my dress'

## Chapter 3      Subjects and Methods

### 3.1 Introduction

The use of diary records of children's speech by researchers for the purpose of studying their language development has been employed for more than a century (e.g. Darwin, 1877, Taine, 1877, Preyer, 1888, Stern and Stern, 1907). The most detailed example of this method is Leopold's study for American English between 1939-49. The diary notes of the child's speech by his or her linguist parent is not confined to the period before tape-recording and today it is still employed in some studies. The advantage of this method is that detailed, longitudinal and daily samples of the child's language development can be provided and used for further research. For example, Leopold's data was referred to by many researchers such as Halliday, (1975), Barrett (1978), Brown (1973), Fletcher (1986), Griffiths (1986) and Ingram (1976). Smith (1973) used the diary procedure for studying phonological development and more recently Tomasello (1992) used this method to investigate the development of the first verbs in his daughter's speech. Tomasello (1992) used a selected portion of his data which he had collected and studied for his master's thesis and doctoral dissertation (Tomasello, 1977, 1980). With the help of his collaborator he computerised a portion of his diary data to a format that could be used by the CHILDES programs and employed it for his recent research (1992). However, he used the computerised diary study to investigate only his daughter's earliest verbs during her 2nd year of life. The procedure is more suitable for tracking phonological development, e.g. (Smith, 1973), or the research on early speech development of children, e.g. (Tomasello, 1992), since in the third year the child's language increases so rapidly that diary notes cannot be continued and there is no other way than to select utterances for the purpose of studying his or her syntactic development.

A great number of researchers have followed Brown (1973) and have done research on a small number of children at frequent intervals. In the 1960s, Brown (1973) selected three children for his study, known as Adam, Eve and Sarah. The collected corpus is one of the most widely known data sets which have been computerised for global use. Many

researchers refer to this corpus as well as the other corpora in order not to waste their time on collecting data. Brown provided a combined study of the children's language development up to the age of about 3. Fletcher (1985) also audio-recorded one child's speech between the ages of 2 and 4 for his research. Although he had many collaborators and equipment facilities for collecting and analysing his data, he still believed that 'the collection transcription and analysis of child language are time-consuming and labour intensive' (1985: 10). Most researchers have selected a limited number of children between ages one and five, e.g. (Bloom, 1970 and Brown, 1973). Although this method does not concentrate on representativeness with respect to the number of children, it will give us a more complete picture of the children's transitional and intermediate stages of development (Fletcher, 1985).

On the other hand, some researchers have preferred large-sample projects, (e.g. Wells, 1981, 1985 and Fawcett and Perkins, 1980). The advantage of this method is that the larger the sample the lower the probability of making errors and the results represent more closely the target population (Fletcher, 1985). The disadvantage of the method is that the concentration on the large number of subjects and samples will result in widening of the sample interval. This will result in losing the developmental information of the children's intermediate and transitional stages. In the justification of his method, Fletcher (1985), who selected only one child for his research, points out:

"Since important changes can take place in a matter of days and since for practical reasons it is generally impossible to satisfy both sampling requirements, it might be argued that we should initially concentrate on the developmental axis and sample frequently from a small number of children... If we concentrate on representativeness with respect to number of children, it is impossible (given, say, a three-month sampling interval) to recover the language of any of these children at intermediate stages." (1985: 11)

The present study is strongly in accordance with this view because the purpose of this research is to give a comprehensive picture of the stages as well as the intermediate levels of the children's language development. For example, at the time of the first video-recording of

Shahzad on July 21, 1993, she used no verb or complement inflection. If we concentrate on the development of inflections and select another sample after a 3 month interval we find more extensive use of verbal and complement inflections in her sample dated September 93. On the basis of extensive use of verbal and complement inflection development we are unable to tell whether the child first used complement or verbal inflections and which type of the inflection, e.g. subject, object, possessive, verb after complement, first emerged in her utterance. This suggests that a three-month sampling interval may result in losing significant information about the child's language learning of inflections.

The role of the observer in data collection is another point that has been discussed by some researchers. Wells (1980:46) found a lower frequency of expansions in his data than Brown (1973). He stated that the parents expanded their utterances only when a stranger was present. Fletcher (1985) claimed that the difference in the frequency of maternal expansions between Wells' (1980) and Brown's (1973) studies was because the data in Brown's study were collected in the presence of outsiders while Wells' data collection occurred in the absence of the observers. Wells inserted a radio-microphone in the child's garment which was controlled by a timing device and the member of the research team was not present at the time of recording. Fletcher (1985), in support of Wells argument, states that 'the size of Wells's sample, together with the change in frequency of expansions when an outsider is present, make his conclusion about the role of the observer in affecting maternal speech style plausible'. In the present study, a careful analysis of Iranian children's samples in respect of the frequency of maternal expansions was carried out. It was found that although the video-recording technique was employed in this study and an outsider was always present during the data collection, the expansion of the children's speech by the parents rarely occurred. However, a great number of repetitions and rare expansions were used by Faeze's father to make the child's utterances clear for the observer. These expansions were not used for the purpose of teaching or providing grammatical information for Faeze. The following examples are selected from Faeze's data:

a) Faeze's father used expansion to make Faeze's utterance clear for the observer

FAA: *xun mi-y-ad*

(blood pres-come-it)

'it is bleeding'

DAD: *chi shod pa:-t xun mi-y-ad*

(what became foot-your bloodpres-come-it)

'what has happened? your foot is bleeding'

b) Faeze's father also used repetition to make Faeze's utterance more clear for the observer

FAA: *hanuz na-xa:bid-am*

(yet neg-slept-I)

'I have not slept yet'

DAD: *hanuz na-xa: bid-i*

(yet neg-slept-you)

'you have not slept yet'

Section b) above was produced for the observer's benefit since Faeze always pronounced the consonant [d] as a substitute for [x], [q] and [g] and sometimes it was also assimilated to other consonants making the child's utterance unclear for the outsider. The following utterance shows the child's pronunciation followed by her father's repetition without any changes in the intonation or even in the utterance itself. This was undoubtedly done to make Faeze's speech clearer for the observer:

\*FAA: [dodemun dadtim]. 'we went ourselves'

\*DAD: [xodemun raftim]. 'we went ourselves'

The other point that should be considered in child language research is contextual information in the collected data. Some researchers have even based their syntactic hypotheses on contextual information (see Bloom, 1970) and some, such as Fletcher (1985), employed the context productively in their studies. It is clear that the quantity of this

information is infinite and the nature of information depends on the aims of the study and it is not possible to rely on the children's output when they are about 2 years old, so some researchers have used the contextual information as an alternative. In this study some information to supplement the transcription was considered. For example, when Mahdi's utterances were limited to two or three words without inflections or grammatical words he showed his mother's watch to his father and said *ma:ma:n sa:at* (mummy watch) with the wrong word order and without the genitive marker, when his mother was out. In this context Mahdi manifested the structural relations possessor-possessed. Suppose in another situation his mother were at home and he took the watch and showed it to his mother, the same utterance could be interpreted as Vocative + Noun. In this context the child's intention would be to show the watch to his mother. To give another example, in one part of the study the focus of attention was on the use of proximal/distal contrasts in Mahdi's data. The contextual notes made it clear where Mahdi and his mother used the pointing device to manifest proximal and distal differences in their speech.

This study follows the precedent of Brown, and operates with small numbers. Furthermore, since this study did not have the personnel and other facilities available to Brown, Wells and Fletcher, it was decided to select three children for a thirty or forty five minute visit every month. The children were studied between 1;8 and 3;4 since the most crucial structural patterns are formed during this period. The advantage of examining three children in detail is to present a general picture of systemic Persian language development. The disadvantage is that the picture may not manifest representativeness. This will be known when a greater sample can be collected. However, the comparisons with studies of the language acquisition of children speaking other languages suggest that the Iranian children's language pattern shows many similarities to theirs.

## 3.2 The Children

### 3.2.1 Faeze:

Faeze, one of the participants in this study, was a girl from a religious Moslem family. She was video-recorded between 2;4 and 3;4 but her samples were selected between the ages of 2;4 and 3;2 for MLU counting (see Chapter 4). Her father was a post graduate student at university. Her mother was a housewife with a low level of English who looked after her continuously. She had a brother three years older than her, at nursery during the day. All of the conversations between Faeze and her mother or her father were in Persian. Apart from her brother, Faeze had three other Iranian friends who frequently came to her home. She was competitive with her brother and tried to learn some nursery rhymes and phrases from him. However, these phrases and words were rote-learned and were not productive in her speech.

There was a weekly meeting of Iranian families, which Faeze always attended. During the meetings the Iranian children played with each other and watched Persian video films. At home, she usually watched Persian video films that her father received from Iran, monthly. Her parents had bought some English story books for her, but her mother described the English stories in Persian. On the whole, she was isolated from the English environment. At the first session of the video-recording, I tried to do the recording myself, but during the recording she liked to be alone with her own family, so Faeze's father video-recorded her for the pilot study and later I took over. She got used to my video recording and behaved very normally after a few sessions. Most of Faeze's recordings were with her father and I could seldom manage to have a recording of her with her mother.

### 3.2.2 Mahdi:

Mahdi, a boy, who was video recorded between 2;2-3;4, was very sociable. His samples were selected between 2;2-3 for MLU counting (see Chapter 4). His mother was a housewife with little English background and his father was a postgraduate student at university. He was very happy to be video-recorded and was fond of watching himself

on T.V. after recording. Mahdi always looked forward to being recorded and prepared himself for the sessions eagerly by tidying up and bringing all of his toys in front of the camera. He was regularly videotaped 30-45 minutes monthly for one year and two months. He had an older brother who was three years older than him. Mahdi's family were very religious and tried to teach him stories from the prophets. He went to a nursery when the video recording sessions were almost at an end. However, even in the nursery most of his friends were Iranian children. During the video-recording his family moved house three times but this did not affect the video-recording sessions and they were very cooperative in letting me know about their new address each time. Most of Mahdi's recordings were either with his father or his mother. His brother seldom participated in the video-recording sessions. It is worth noting that most of Mahdi's family's visitors were Iranians living temporarily in the United Kingdom.

### 3.2.3 Shahrzad:

Shahrzad, a girl, who was video-recorded between 1;8 and 2;6 months was selected in order to investigate the earlier stages of language development in Iranian children. Her data were selected between the ages of 1;9 and 2;6 for MLU counting (see chapter 4). Shahrzad's family, like the other two children's, was very religious. Her mother was a housewife and her father was a postgraduate student. Shahrzad's family were living temporarily in England. Shahrzad, like Mahdi, was fond of being video recorded. Most of her recordings were with her mother at home. Shahrzad's style of language learning seemed to be different from the other two children. Most of her speech was holistic (Bates et al. 1995) and in imitation of her mother's. She was always waiting for her mother to ask her some questions to reply to. It was interesting that she had recognized that the recording was for her talking so when she did not sometimes have anything to say she began singing songs. She tried to speak effectively during the sessions, but most of her phrases were rote-learned. Shahrzad had two older brothers who were three and four years older than her. Shahrzad's mother always tried to teach her directly and wanted Shahrzad to imitate her in speaking. Her

conversations with her brothers contained a similar proportion of rote forms.

### 3.3 Transcription

The collected data was transcribed immediately after each session. The data was transcribed orthographically and occasionally phonetically. The vowels were transcribed phonetically since the vowel system of Persian is simple and may be summarized as follows:

	front	back
high	i	u
mid-high	e	o
mid	a	a:

The transcription for long *a* throughout the thesis was decided to be *a:* and this convention was followed for transcribing the data into the CHILDES database.

Winfuhr (1979) gives the following table for Persian consonants:

stops	fortis	p t ch k
	lenis	b d j g
fricatives	fortis	f s sh x
	lenis	v z zh q
nasals		m n
liquids		l r
glides		y h ?

The transcription for all consonants, except 'q', '?', and 'x' was done orthographically. Recent studies, e.g. Samareh (1986), give the following different phonetic descriptions for 'q', 'x' and '?':

- q uvular, plosive
- x uvular, fricative
- ? glottal, plosive, voiceless, pulmonic consonant

The above phonetic version was considered through the study.

In addition, the data was transcribed in a way to meet the minimum set of standards for a CHAT (Codes for the Human Analysis of Transcripts, see 3.4.2.1 for description) profile. In order that the CLAN (Computerised Language ANalysis, see 3.4.2.1 for description) programs run successfully on the transcribed data MacWhinney (1991: 8,9) established the following guidelines:

1. Every character in the file must be in the basic ASCII character set.
2. Every line must end with a carriage return.
3. The first line in the file must be an @Begin header line.
4. The last line in the file must be an @End header line.
5. There must be an @Participants header line listing three-letter codes for each participant, the participant's name, and the participant's role.
6. Lines beginning with \* indicate what was actually said. These are called "main lines". Each main line should code one and only one utterance. When a speaker produces several utterances in a row, code each with a new main line.
7. After the asterisk on the main line comes a three-letter code in upper case letters for the participant who was the speaker of the utterance being coded. After the three letter code comes a colon and then a tab.

8. What was actually said is entered starting in the ninth column.
9. Lines beginning with the % symbol can contain anything.  
Typically, these lines include codes and commentary on what was said. They are called "dependent tier" lines.
10. Dependent tier lines begin with the % symbol. Then comes a three-letter code in lower case letters for the dependent tier type, such as "mor" for morphology, a colon, and then a tab. The text of the dependent tier begins in the ninth column.
11. Continuations of main lines and dependent tier lines begin with a tab.

The above minimum standard of CHAT was carried out on the Persian data. A small sample of the data, all of which has been formatted according to the above conventions, is seen below:

@Begin

@Participants: FAA Faeze Child, DAD father

@Date: 22-JUN-93

@Age of FAA: 2;8

@Filename: FAEZE. CHA

@Situation: free talk

\*FAA: uno beza:r dige.

%mor: pron | un-omarker | o be#vimp | za:r adv | dige.

%syn: X V Y.      X Y + O: NP.  
[Pron Omarker].

\*DAD: xodka:ret xob bardar dige.

\*FAA: xodet.

%mor: proreflex | xod-INF | et&2s.

%syn: elliptical.

\*DAD: xodam barda:ram?

\*FAA: ha:

%syn: minor.

\*DAD: ma:sha:la: xob beya: pa:ein barda:r dige.

\*FAA: in dorost nisht.

%mor: pro | in adj | dorost neg | ni#cop | st&pres\_3s.

%syn: <S C V>.

\*DAD: che tori doroste?

\*FAA: yeba:r dige ba:zi bekonam?  
 %mor: adv | yeba:r adv | dige n | ba:zi be#v | kon&pres-INF | am&1s.  
 %syn: < X CompVI>. [D N N]. XY + A: AP.  
 \*DAD: ina: beza: pa:ein. beza: pa:ei ina:reo.  
 \*FAA: na.  
 %syn: minor.  
 \*DAD: rixtesh mixa:st ruye miz xalvat ba:she betune una:ro bechine. chi shode?  
 \*FAA: ekast.  
 %mor: v | shekast&past\_3s.  
 %syn: <V>.  
 \*DAD: shekast?  
 \*FAA: a:re.  
 \*DAD: che ka:resh bekonam xob ha:n ba:yad che ka:resh konam ha:la:?  
 \*FAA: chash bezan.  
 %mor: n | chash be#vimp | zan.  
 %syn: <O Vimp>.  
 \*DAD: dige naxaram bara:tun chizi.  
 \*FAA: a:re bexar.  
 %mor: minor | a:re be#vimp | xar.  
 %syn: <MINOR Vimp>.  
 \*DAD: xob bolandesh kon az un zir daresh beya:r.  
 \*FAA: ekast.  
 %mor: v | shekast&past\_3s.  
 %syn: <V>.  
 @End.

If the main line indicated the child's actual speech, the target utterance was given orthographically on the morphological tier. For example, in the last main line of the above transcription the child said *ekast* instead of *shekast* so the target language was used and analysed on the morphological line. The conventions which are used on %mor and %syn lines are explained in 3.4.2.2.

In English, children's syntactic rule-learning when producing questions has drawn many researchers attention. English-speaking children make mistakes in forming questions by using an inappropriate device to signal questions, e.g. 'did your daddy came home', 'what daddy will say', 'you tell me a story' (Fletcher, 1985: 27). This is not true in the case of Persian-speaking children since the only way of forming yes/no and WH questions in this language is to change the intonation of affirmative utterances. Therefore, intonation plays the main role in changing the statement utterances to question forms. Hence, in the

transcription of the children's data a question mark was used to signal a question and a full stop to indicate a statement.

Pauses were considered during the transcription. It is important to record pauses within the transcribed data since long pauses may indicate a lack of responding to questions. Pauses also provide information about the different level of comprehension of questions for either delayed or normal children (Fletcher, 1985). In the case of the transcription of Persian data, only long pauses, longer relative to a pulse of the speaker's rhythm, were noted on the manual transcribed corpora. The example below is selected from Faeze's data and shows the occurrence of long pauses in Faeze's speech. Faeze's mother is asking Faeze what a child should do when she or he gets up in the morning and comes down for the breakfast.

\*MOT:        *mi-y-a:d to ota:q be ba:ba: chi mi-g-e?*  
                  (pres-come-she inside room to daddy what pres-say-she)  
                  'when she comes to the room what does she say to her  
                  daddy'

\*FAA:        *sala:m*  
                  'hello'

\*MOT:        *sala:m boland-tar be-gu.*  
                  (hello, loud-er imp-say)  
                  'hello, say it louder'

\*FAA:        *sala:m*            (she says louder)  
                  'hello'

\*MOT:        *a:farin doxtar-am bad chi mi-g-e?*  
                  (well done daughter-my then what pres-say-she)  
                  'well done my daughter then what does she say'

pause

\*MOT:        *sob bexeir*  
                  'good morning'

\*FAA:        *sob bexeir*  
                  'good morning'

\*MOT:        *barkala: bad che ka:r mi-kon-e?*  
                  (well done then what do pre-do-she)

- 'well done then what does she do'
- \*FAA: *baqal*  
'hug'
- \*MOT: *mi-r-e baqal e ba:ba:sh mi-gir-e sobha:na-sh-o mi-xor-e.*  
(pres-go-she hug ezafe daddy-her pres-hold-she  
breakfast-her-omarker pres-eat-she)  
'she gives a hug to her daddy and then has her  
breakfast'
- \*FAA: *ey* (playing)
- \*MOT: *bad ba:ba:-ro che ka:r mi-kon-e?*  
(then daddy-omarker what do pres-do-she)  
'then what does she do to her daddy'
- \*FAA: *baqal*  
'hug'
- \*MOT: *baqal mi-kon-i badan che ka:r mi-kon-i?*  
(hug pres-do-you then what do pres-do-you)  
'You give a hug then what will you do'
- pause
- \*FAA: *baqal*  
'hug'
- \*MOT: *badan*  
'then'
- \*FAA: *baqal*  
'hug'

The pauses in Faeze's speech at 2;4 are in accordance with Fletcher's finding of pauses in a language-delayed child at 3;6 who failed to reply to a question that must have a verb in response (see Fletcher, 1985: 16,17). After the second pause, Faeze repeats the utterance that she had already said. The above example shows that whenever Faeze's mother asks her a question that needs a verb in response she uses either the noun part of a compound verb or pauses.

The transcription also includes all of the fillers/filled pauses such as eh, um. Stress in English is important and should be considered in the transcription of the data since this would help to improve the

investigation on 'motherese,' particularly in the case of the development of auxiliaries. However, in the case of Persian stress has a specific place and it is always located on the last syllable of a word (Bateni, 1970b). Hence, the rhythm of Persian is based on syllables and is syllable-timed while in English the rhythm is based on stresses and is stress-timed. Since there is not enough information on the stress and other non-segmental aspects of Persian and in addition the structure of auxiliaries and modals is completely different in pro-drop languages, like Persian (Hyams, 1993), these aspects were not noted. It would be an interesting area for further research to investigate the role of stress in input for languages with no change in the position of the stress. However, since rising intonation is the only way of changing affirmative utterances to questions, this non-segmental aspect, which plays a grammatical role in Persian, as a signal of a question, was noted and shown on the transcribed data by question marks.

### 3.4 Methods

#### 3.4.1 Video-recording

There is an argument that interaction and environment play an important role in the development of child language and for this reason the children under study were videotaped during the sessions. Video-recording as a means of capturing the larger context and supplying more detailed information was preferred to audio-taping in this study. Furthermore, this method is reliable and facilitates the children's sample analysis by offering easy reference to observable phenomena. MacWhinney (1991: 3) in support of this method states that the videotape is the most accurate record of an interaction that is available. He points out:

"...an audio recording can never preserve as much detail as video recording with a high-quality audio track. Audio recordings record none of the nonverbal interactions that often form the backbone of conversational interaction. Hence, they systematically exclude a source of information that is crucial for a full interpretation of the interaction". (1991: 3)

The camcorder used for this study also allowed me to record the date. All of the video-recordings were done in the children's home in a naturalistic setting. During the recording, I tried to use a well-lighted room and not keep the subjects in shade otherwise the lens decreased automatically in response to the background light and the subjects were underexposed. The camera was usually hand-held and operated manually without using the tripod so that it could be moved easily with the movement of the children and in this way keep them within the angle of the lens. The camera was usually on a level with the participants.

### 3.4.2 Method of analysis

#### 3.4.2.1 Introduction

The method for the analysis of the transcripts was a CHILDES-like format. The CHILDES (Child Language Data Exchange System) project, designed by MacWhinney and Snow in 1985, initially aimed to collect a nonstandardised database of computerised corpora. Later on, this program was developed for the analysis of old data and for the collection and transcription of new corpora of face to face conversational interactions. The system is designed for use with both normal and disordered populations. 'Now', as MacWhinney (1995: 154) points out, 'researchers have access to the results of nearly a hundred major research projects in over a dozen languages across the last 25 years'. This computational tool which will facilitate the sharing of transcript data allows researchers to enter the transcript data into computer files and analyse it by standard data-processing techniques. It has three major components: the database, the CHAT (Codes for the Human Analysis of Transcripts) transcription systems and the CLAN (Computerized Language ANalysis) programs (see MacWhinney, 1991). The CLAN programs are designed to perform a large number of automatic analyses on the transcript data that have been placed into the CHAT format. In this study the CHAT format for morphological and syntactic analysis was employed. As explained before, the transcriptions were analysed in two tiers: %mor for morphological analysis and %syn for syntactic analysis. The main tiers are identified by the symbol \* while the

symbol % is used for the analytical tiers. This format is called a CHILDES-like analysis in this project since from time to time it was necessary to include a third tier for the phrasal analysis which is not anticipated in the CHAT transcription systems and furthermore, many new conventions and codes need to be added to this system for Persian. Since one of the aims of this study is to give a preliminary measurement for Persian to order the samples, based on MLUm (Mean Length of Utterance in morphemes) (Brown, 1973), a %mor line was necessary for the transcripts. This measure is explained in detail in Chapter 4. In addition, in order to present a detailed and orderly analysis of the children's language development, the LARSP (Language Assessment Remediation & Screening Procedure) (Crystal, Fletcher and Garman, 1989) framework was adapted to Persian. This procedure is explained in Chapter 5. The LARSP framework has three levels of grammatical analysis: clause, phrase and word. Therefore, the %syn tier was added and an additional tier for phrasal analysis was included (see page 61). A number of other categories from the LARSP framework (see the LARSP profile, page 127) were noted e.g. social minor and elliptical utterances. However, in order to prepare the corpora for the CHILDES database, which is a future plan, there is a need for a new format to meet the CHILDES standards. This will be carried out after this study. The CHILDES system enables researchers to search and analyse a large number of corpora. This provides a means of cross-linguistic analysis for the purpose of clarifying the issue of 'universals.'

#### **3.4.2.2 Morphological and Syntactic Coding and Analysis**

As explained above, this study included morphological and syntactic analyses to give a systematic and overall picture of the children's grammatical development. Moreover, many researchers of child language are interested in examining the role of universals in language acquisition through examining the syntactic development in children's corpora from different languages. MacWhinney (1991: 95) suggested a system for morphological and syntactic coding for the corpora which is extremely detailed and will be employed fully in the future. The system which has been used in this study gives an initial coding for morphological and syntactic analyses in Persian. MacWhinney (1991)

suggested two ways of morphological coding: a) superficial morphological analysis can be done on the main line. b) %mor line should be used for a deeper morphological analysis. This study favoured approach b). However, some of the conventions that MacWhinney suggested were not included as they were not necessary for this study, e.g. the errors and omitted categories. These conventions exist in the manual transcription. The transcribed data in this part is not in italic since they were computerised in the plain format. The following coding and conventions were employed for morphological coding and analysis:

q	question
cop	copula
pres	present tense
past	past tense
pres perf	present perfect
past part	past participle
omarker	object marker
vimp/Vimp	imperative verb
n	noun
adj	adjective
adv	adverb
det	determiner
1s	first person singular
2s	second person singular
3s	third person singular
1pl	first person plural
2pl	second person plural
3pl	third person plural
neg	negative
prep	preposition
poss	possessive
reflex pron	reflexive pronoun
aux	auxiliary
INF	inflection
PP	prepositional phrase
	separates a morpheme from its grammatical definition

- the attachment of an affix to a root
- &,\_ the combined categories in a single morpheme

1. Each word on the %mor line is separated by spaces to correspond to a space delimited word on the main line. However, the minor and vocative utterances and some categories, e.g. pres perf or reflex pron, on the morphological line did not correspond to a space delimited word on the main line, e.g.

\*SHA: ba:ba: beya: 'daddy come'  
 %mor: be-vimp | ya:

2. the coding on the %mor line ends in a full stop or a question mark.
3. The symbol | on the %mor line separates a morpheme from its grammatical definition, for example:

\*FAA: ino. 'this'  
 %mor: pron | in-omarker | o

5. -hyphen is used to indicate the attachment of an affix or an inflection to a stem, e.g.

\*SHA: nada:ri. 'you don't have'  
 %mor: neg | na-v | dar&pres-INF | i&2s.

6. The symbols (&), (,) are used to indicate the combined categories in a single morpheme, e.g.

\*FAA: kodume? 'which one is it'  
 %mor: q | kodum-cop | e&pres\_3s.

It should be borne in mind that the main analyses of samples have been done manually since the computerised data still needs more consistent coding and careful checking. However, the coding which was done facilitated some quick references to specific categories in the

data. For example, the frequency program was used to count the total number of a grammatical category used in a sample.

The syntactic coding was done on the %syn tier. Clauses are either enclosed in single brackets followed by full stop or only ended in a full stop. The phrase structures are indicated in square brackets on the same line or the following line. The following grammatical conventions were employed:

I	Inflection
V	Verb
CompV	Compound verb
S	Subject
N	Noun
C	Complement
WHQ	WH Question
X	any grammatical elements
A	Adverb
ADJ	Adjective
AUX	Auxiliary
Pr	Preposition
Pron	Pronoun
(V)	Contracted copula after complement
D	Determiner

Capital letters were used for the syntactic coding. The example below illustrates this:

\*FAA:        naqa:shi a:dam tush mikeshe. 'drawing is something a  
person draws in'  
%mor:        n | naq:shi n | a:dam PP | tu&pron | sh&3s mi-  
v | kesh&pres-3s | e.  
%syn:        <O S A VI>.  
              [Pr Pron].

However, like morphological coding, the rules for achieving one-to-one correspondence to words on the main line was not fully applicable because of many new categories in Persian, such as compound verbs, as shown in the following example:

\*FAA:        xun miya:d            'it is bleeding'  
 %mor:        n | xun mi-v | y&pres-a:d | 3s.  
 %syn:        <CompVI>.  
               [N VI].

The brief explanation above begins to show that the transcribing and analysis of the collected data in this study was extremely time-consuming and labour intensive. However, it is hoped that the complete analyses and formatting of the data can be achieved soon and used by Iranian researchers as well as other investigators of child language acquisition for their cross-linguistic studies.

## Chapter 4

# The applicability of MLU measures to the acquisition of Persian and a proposal for a preliminary developmental measure for Persian\*

### 4.1 Introduction:

Mean Length of Utterance (MLU) has become one of the generally accepted first steps to measure grammatical development in children. Initially, this measure was used by Nice (1925) for counting children's average word utterance length, but it was Brown (1973) who popularised this measure by calculating MLU in morphemes (henceforth, MLUm). Since Brown (1973), MLUm has been employed in many studies of child language to measure natural language acquisition and to make comparisons with disordered populations. This measure, in fact, has become one of the most widely used yardsticks for measuring grammatical development in language acquisition.

MLUm was central to Brown's (1973) study. He calculated it by dividing the total number of morphemes in a sample of 100 utterances of a child's language by the total number of utterances in that sample. For example, stage I begins when MLUm rises above 1.0 and extends to 2.25 and so on up to stage V when MLUm ends at 4.0. Brown himself believes:

"MLU is an excellent simple index of grammatical development because every new kind of knowledge increases length . . . (especially if measured in morphemes, which includes bound forms like inflections rather than words)." (1973, 53-54)

Brown (1973) used MLUm for matching the grammatical development in his three subjects because he observed that rate of acquisition varies considerably between children when matched by age. He concluded that

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\* A version of this chapter is to be published as part of the Child Language Seminar'95 proceedings.

children who are matched for MLUm are more likely to have speech that is at the same level of constructional complexity than children of the same chronological age.

While this practice seems to have found acceptance among many researchers of child language and has particularly been applied by English researchers to impose a preliminary ordering on samples before carrying out further detailed analysis, e.g. (Fletcher, 1985, Wells, 1985), the use of MLUm as a general index of grammatical development has not been without critics, e.g. Crystal (1974). In addition, its use with languages other than English is not always straightforward and it is often necessary to develop a set of language-specific procedures for morphological segmentation in order to calculate MLUm.

Crystal (1974) in his review of Brown (1973) pointed out that Brown needed to be more explicit both about the notion and his way of working with MLU. Concerning these problems, Crystal warned researchers in other languages about the danger they might face in applying Brown's model. He points out:

" . . . one of the most important tasks for child language research in the next decade is to substantially increase the amount of data on languages other than English. Many researchers will try to apply Brown's model, and they will be faced with a large number of problems, both of principle and analytic detail, which (the danger is) they will 'solve' by arbitrary means." (1974, 300)

This problem had already happened in the case of Park's study of German. Park (1974) tried to apply MLUm to his analysis of the acquisition of German. However, he felt that he might exaggerate the child's knowledge of his grammatical development, by applying a morpheme measure to an inflecting language. Although Park (1974) gave up calculating MLUm for his subject's grammatical development at the very early stages of language development, he agrees that MLU is a more reliable basis than the age on which children's ability could be estimated at early stages of their language development. Park (1974) calculated MLU for one child when aged 25;3 to 26;3 months, that is, only for the period of one month and he believes that MLUm overestimates

the child's grammatical development because the child is not aware of the productivity of the morpho-phonemic rules at the early stages of grammatical development. There is no evidence that the MLU measure is applicable to later stages of grammatical development in German-speaking children. In addition, Ariman, Van Niekerk-de Haan and van de Sandt-Koenderman (1976) in their study of Dutch MLU<sub>m</sub> measure stated that an element in a child's utterance could only be called a morpheme on the basis of a well-developed grammar of the child's language at that time. They, like Crystal, saw the danger in the use of arbitrary rules (see Ariman et al. 1976 for detail).

In spite of the above criticism and in regard to the validity and usefulness of MLU measure (see Blake, Quartaro and Onorati, 1993), attempts were made to devise an MLU measure of early language development for Hebrew (Dromi and Berman, 1981) and Irish (Hickey, 1987, 1991).

Dromi and Berman (1982) tried to apply MLU<sub>m</sub> to Hebrew, a highly synthetic language, although they faced some difficulty because they were unable to agree with Brown's idea that every new kind of knowledge increases the length of the child's utterance. Nevertheless, they chose the term MPU, Morpheme Per Utterance, to reflect the view that it was the number of morphemes, not the length, which characterised linguistic maturity in Hebrew. For example, they argue that in English the stem can be easily determined (e.g. go-ing, work-ed, en-large, etc.) while in Hebrew the stem can not always be identified on the surface because all verbs and most nouns and adjectives are made of consonantal root plus associated affixal patterns (e.g. the following words are all based on the triconsonantal root k-t-v; kartav 'write', hixtiv 'cause to write', hitkatev 'write each other', etc.). That is, there is no clear cut root in this language. Since these researchers had found MLU<sub>m</sub> to be a useful developmental index in the earlier stages of language acquisition, they decided to consider root plus pattern as the stem of each lexical item. Hence, in Dromi's and Berman's system of calculation, each stem was given a single unit as 'children would not treat roots or patterns as independent items.' (Dromi and Berman, 1982: 404)

Furthermore, as Hebrew is not only a highly synthetic language, but a richly inflected language as well, Dromi and Berman solved this problem by establishing a set of rules for the calculation of nouns, adjectives, verbs, etc. In their system of calculation, in order to minimise the problem of inflated values they tried to be more accurate in the real assessment of children's grammatical abilities at the early stages of acquisition. For example, they counted the words that were not productive (i.e. 'rote' forms MacWhinney, 1978) as one morpheme, as Brown (1973) did for the words like 'gonna' and 'wanna'. In other words, in a highly synthetic and inflected language like Hebrew it is not possible to segment a word into a linear string of morphemes as in English, and the bulk of derivational morphology in the Hebrew of very young children is considered non-productive and therefore not included in the calculation of MLU.

They tested the evaluation of MPU and the usefulness of these rules with Hebrew-speaking children aged two to three and they concluded that it was possible to establish a system to measure morphological complexity of young children's speech in a highly synthetic and inflecting language. However, they admitted that they were forced to make 'numerous arbitrary decisions' in establishing those rules.

Generally, MLU has been used as an intra-language device in Hebrew, allowing comparison of the same child's language over time and between children acquiring the same language.

Similarly, Hickey (1987, 1991) attempted to calculate MLUm for Irish. Irish is 'an inflectional language tending more towards isolating than polysynthetic in general,' (Stenson, 1981:17). Irish, in Hickey's view, is like English falling somewhere in between a highly inflectional language, like Hebrew and Japanese, which is highly agglutinative - i.e almost any development is manifested by increased utterance length. Hickey argues that although Irish is like English in the number of morphological combinations, there are differences between Irish and English which affect the counting of morphemes. These differences also affect the adaptation of MLU as an index of Irish development. In her calculation of morphemes, Hickey (1987) took the first 100 utterances after the 50th

utterance of her subjects and tried to count only those morphemes which were productive in the child's language. She excluded utterances of a minor and social function, e.g. yes, no, bye bye, which Brown (1973) did not, and concentrated on those that had overt grammatical structure.

She used a comparison of MLUm, MLUw and MLUs (where m=morpheme, w=word and s=syllable) values for her subjects' data and found that there were high correlations between them. Consequently, she selected the MLUw measure as an index for comparing the grammatical development in her three subjects. Hickey argued that MLUw was the easiest measure to apply to Irish and was apparently no more insensitive than MLUm. It cannot be assumed, therefore, that MLU can automatically be applied to other languages in the same way as it can in English. Careful scrutiny of the language and its use by children is essential in order to assess the validity of MLU and decide on the way it should be calculated.

The above discussion of MLU has been restricted to German, Dutch, Hebrew and Irish because in other studies the MLU measure has only been reported without any comments or clear investigation. Even the research on the application of MLU to English after stage II has rarely been empirically tested. The only evidence comes from Klee and Fitzgerald (1985) who evaluated the grammatical performance and MLU of 18 normally developing 2-and 3- year old children.

In conclusion, Brown (1973) did not anticipate that his measure might be used in other languages than English in future so he oriented his rules solely toward English. Yet, in spite of difficulties in establishing the rules of MLU in other languages, researchers in child language need some simple descriptive norm to evaluate children in terms of their linguistic abilities and assess the extent of language disabilities in disordered populations. The application of MLU by many English researchers and the attempts to apply MLU measures to languages other than English as an intra-language device show that this measure is a useful and widely applicable tool for assessing children's linguistic ability. Therefore, it was decided to investigate its validity for Persian,

as well. A general simple index would help researchers and speech therapists to evaluate children in terms of their linguistic abilities.

## 4.2 method:

MLU counts in morphemes, words and syllables were carried out on 100 spontaneous utterances after the first 50 utterances of each sample. Since MLU is an index of syntactic ability, social minor utterances, e.g. *na*, 'No' *ba:yba:y* 'bye bye', repetitions and vocatives, e.g. calling mum or dad, were excluded.

## 4.3 MLU measures:

Morpheme, word and syllable counts were carried out on samples from the three children. High correlations were found between MLU<sub>m</sub> and MLU<sub>w</sub> ( $r= 0.81$  for Mahdi,  $r= 0.99$  for Faeze and  $r= 0.91$  for Shahrzad). Also, there were high correlations between MLU<sub>m</sub> and MLU<sub>s</sub>, ( $r= 0.84$  for Mahdi,  $r= 0.97$  for Faeze and  $r= 0.99$  for Shahrzad). Figures 1, 2 and 3 plot the three measures for the three children. However, unlike work carried out on Irish (see Hickey, 1991), there were a large number of instances where there were possibilities of counting more morphemes than words. Furthermore, it was found that counting words instead of morphemes is not a good measure of grammatical development in Iranian children. For example, in Persian the third person singular copula *e* is attached to adjectives, pronouns and nouns and is used productively by Iranian children. This can be seen in *in meda:d* (this pencil), which is an immature clause in Persian, and *in meda:d-e* (this pencil-is) 'this is a pencil' which would both be counted as two words but consist of two and three morphemes respectively. To give a further example, the word *sard* 'cold' in Mahdi's data changed to *sard-e* (cold-is) 'it is cold' in the later stages of his language development. This would not be reflected in an MLU<sub>w</sub> count. Furthermore, in a rich verbally inflected language like Persian verb inflections would not be picked up in an MLU<sub>w</sub> calculation. That is, one of the most important factors of language development in this language, inflections, would be ignored. For example, this can be seen in *mi-xor-am* (pres-eat-I) 'I eat' and *mi-xor-am-et* (pres-eat-I-you) 'I eat you' which would both be

counted as one word. The following examples illustrating the importance of verbal inflections and the emergence of copula *e* are from Mahdi's data (the stages are decided according to the number of elements per construction):

Stage I	<i>raft</i> 'went'	<i>ax</i> 'bad'	
StageII	<i>raft-am</i> (went-I) 'I went'	<i>ax-e</i> (bad-is) 'it is bad'	<i>gerft-am</i> (caught-I) 'I caught'
StageIII			<i>gerft-am-esh</i> (caught-I-it) 'I caught it'

Consequently, an MLUw count does not indicate that the child is in a higher stage of grammatical development and in a rich verbal inflected language like Persian verb inflections are not taken into account in an MLUw calculation.

Similarly, a syllable (MLUs) count will overestimate the child's linguistic ability in Persian. MLUs is more susceptible to arbitrary decisions and furthermore, young children's tendency to duplicate syllables would inflate a syllable count (Hickey, 1991), e.g. *la: la:* 'sleep' *da: da:* 'brother'. It should be borne in mind that generally the terms 'underestimate' and 'overestimate' do not rule out the absolute values of low MLU for word and high MLU for syllable measures in this study.

MLUm was preferred since this measure takes into account features such as the emergence of copula *e* and verbal inflections in Persian whereas MLUw and MLUs did not reflect grammatical complexity and productivity in Persian. In addition, the MLUm measure has been widely employed in child language research.

#### 4.4 Rules for counting words in Persian

1. Each word was counted separately.

2. Repetitions, imitations, social minors, false starts and incomplete utterances were not counted.

3. Inflections and prefixes were not counted separately, e.g. *mi-xor-am-et* (pres-eat-I-you) 'I eat you' = single unit

4. Prepositions were counted separately, e.g. *yek chiz-i az to in* (one thing-indefinite marker from inside this) 'something from inside this' = 5 units

5. Object marker and *ezafe* were not counted separately, e.g. *man-o* (I-Omarker) 'me'=single unit, *ota:q e to* (room *ezafe* you) 'your room' = 2 units

6. *ma:l* was counted separately, e.g. *ma:l e da:da:shi* (*ma:l eza:fe* brother) 'belong to brother' = 2 units

7. Compound verbs were counted separately, but compound nouns were taken a single unit.

#### 4.5 Rules for counting syllables in Persian

1. The syllable counting was decided according to the child's pronunciation, e.g. some syllables would be sometimes omitted or mostly duplicated in the child's utterance. For example, *ne-mi-kon-am* (neg-pres-do-I) 'I do not do' might be pronounced *ni-kon-am*. =3 units and *da:da:* 'brother, sister' and *la:la:* 'sleep' were counted two units. However, there would be some arbitrary decisions because of the ambiguities of the child's pronunciation.

2. Social minors, repetitions, imitations, false starts and incomplete utterances were not counted.

3. The prefixes *be* and *mi* were counted separately.

## 4.6 Rules for counting morphemes in Persian

1. The third person singular copula *e*, e.g. *sard-e* (cold-is) 'it is cold', is counted separately.

2. All nouns and compound nouns were counted as one morpheme only.

3. All inflectional prefixes and suffixes of nouns, verbs, auxiliaries and modal auxiliaries are counted separately e.g. *madres-am*, (school-my) 'my school' or *mi-r-am* (pres-go-I) 'I go' *la:la: kard-e* (sleep did-aux) 's/he has slept' and *mi-xa-am be-bor-am* (pres-want-I subj-cut-I) 'I want to cut'.

4. All component elements of compound verbs such as *xara:b kard* (ruin did) 's/he broke down' are counted separately.

5. The genitive marker *e* (called *ezafe* in Persian), e.g. *ota:q e man* (room *ezafe* my) 'my room' and the same marker for modifiers, e.g. *pesar e xub*, (boy *ezafe* good) 'the good boy', are counted separately.

6. Ellipticals are counted separately. e.g. the child omits some normally obligatory elements of grammatical sentence appropriately, for example:

MOT: *mamad koja:st?*

(Mamad where is)?

'Where is Mamad?'

MAH: *xune*

'home' [instead of saying 'Mamad is home']

7. Imperative and subjunctive prefixes *be-/bo-/biy-* e.g. *biy-ya:* 'come' or *be-xor-am* (subj-eat-I) 'I eat' were counted separately as soon as they were productive in the child's utterance.

8. Objects as suffixes of verbs were counted separately, e.g. *mi-xor-et-am* (it will eat me).

9. The object marker *ro/o* was counted as one morpheme, e.g. *man-o be-bin* (me-Omarker imp-see) 'see me.'

10. Third person singular past tense verbs with zero inflection were counted as one morpheme, e.g. *raft* 'went' since they resemble the past root in Persian.

11. Negative third person singular present tense copula, *nist*, 'it isn't' was counted as one morpheme, but if the child could use it in contrast with *hast*, 'it is' it would be counted as two morphemes.

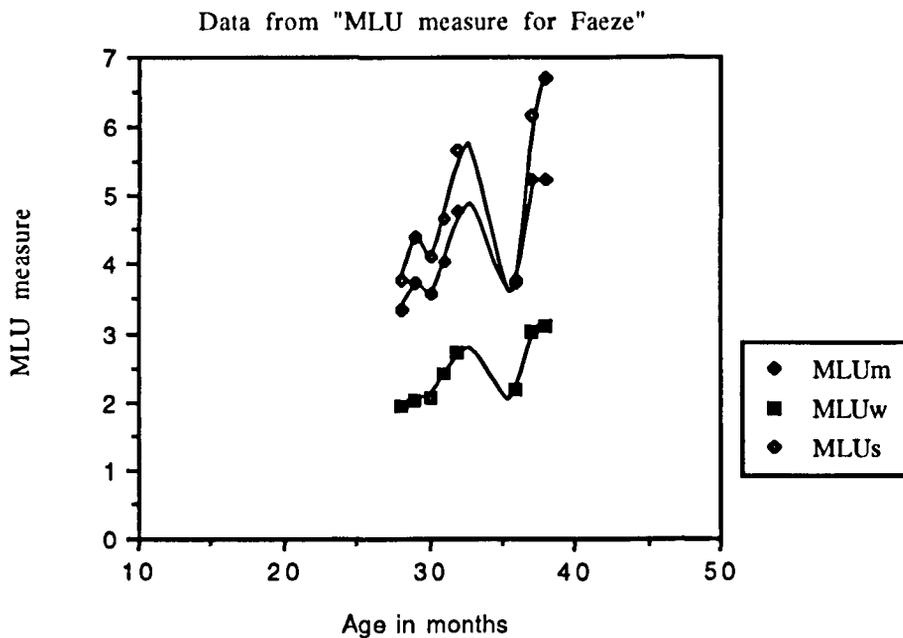


Figure 1 - MLU measures for Faeze

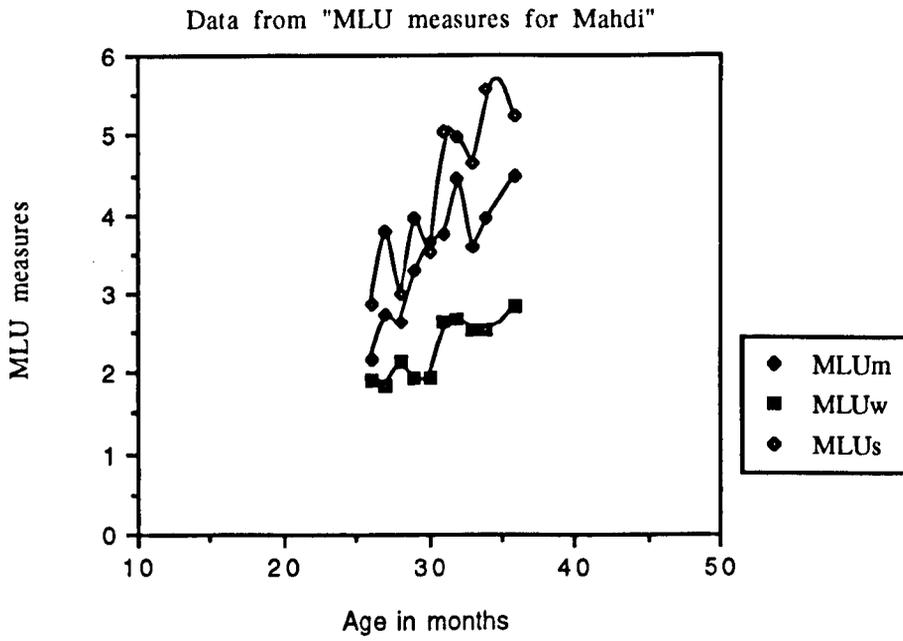


Figure 2 - MLU measures for Mahdi

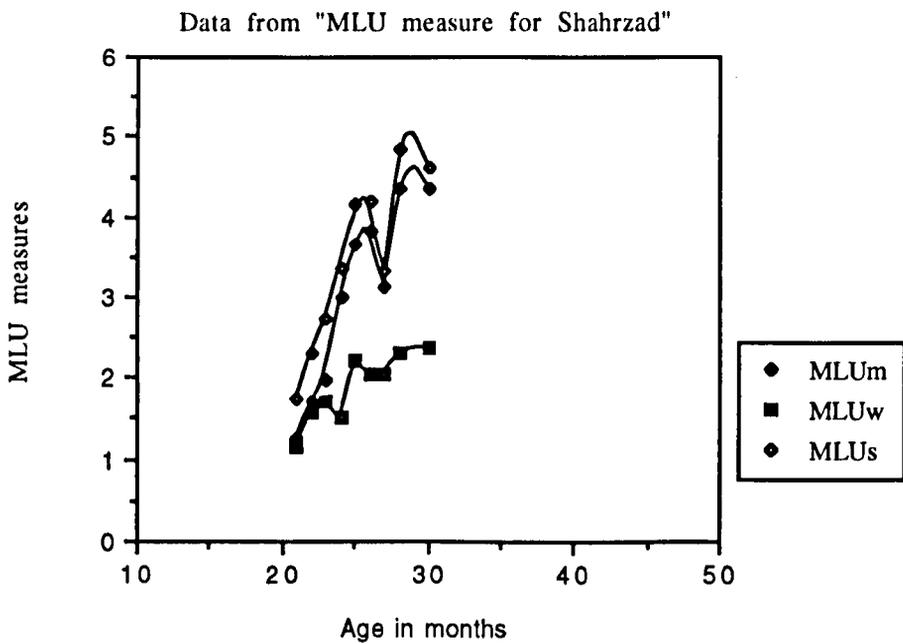


Figure 3 - MLU measures for Shahrzad

## 4.7 A preliminary developmental measure for Persian

A morpheme (MLUm) count was carried out on 100 utterances after the first 50 utterances of each sample from Faeze's, Mahdi's and Shahrzad's data:

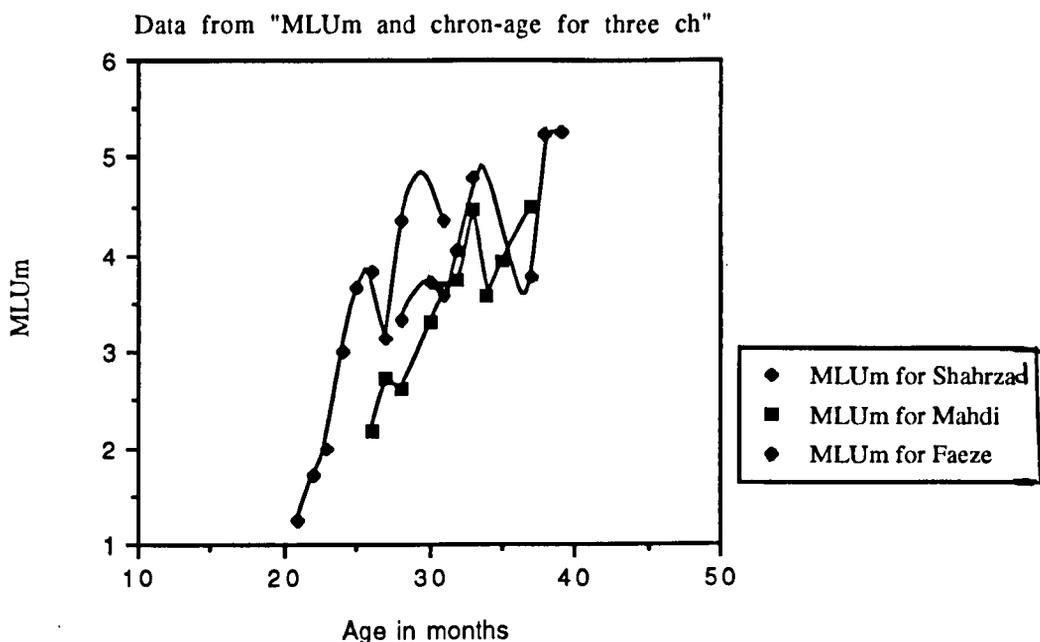


Figure 4 - MLUm and Chronological age for three children

As is indicated in figure 4, MLU measured in morphemes is increasing up to 4 in Persian since the curves of MLUm for the three Iranian children after value 4 are mostly in zig-zag patterns. Hickey (1991:555) also pointed out that MLU would not be a useful index with which to match children if it showed a zig-zag pattern overtime, or levelled off while the child's language continued to develop. This is true in the case of measuring MLU for Persian acquisition since at value 4 the Iranian child begins producing a very varied range of constructions and the MLU of a sample is a better reflection of what the child happens to say than what the child knows. So the index loses its validity as an indicator of grammatical knowledge (Brown, 1973:54). In order to minimise the problem of counting morphemes in Persian acquisition data, an attempt

was made to be more explicit than Brown in counting morphemes. False starts, incomplete utterances, repetitions, imitations, social minor, unproductive forms, and rote utterances (see MacWhinney, 1978) were not counted.

#### 4.8 MLU and age

Brown (1973) used MLUm for comparing grammatical development in his three subjects because he observed that the rate of acquisition varied between children when matched by age. However, Brown's graph of his subjects' MLUm showed that the curves of all three rose with age and in addition these curves were placed along the age axis. Moreover, in spite of Crystal's (1974) criticism of Brown's model, Crystal, Fletcher and Garman (1989) developed the syntactic stages of development, based on age, which is similar to Brown's MLU measure. Crystal (1974) himself stated:

"... we have been using a notion of syntactic stages of development which is similar to Brown's in many respects, though it is not based on MLU, and aims to take in developmental information a little earlier and later than that covered by his five stages. We have found that most of Brown's descriptions correspond to those established for our children." (1974: 300)

There are conflicting results from research into the correlation between MLU and age. For example, Wells (1985) found that MLUm rose with age for his 128 subjects up to value 3;6. Miller & Chapman (1981) found the same high correlation between MLU and age for their subjects. Similarly, Hickey (1991) found a high correlation between MLUw, MLUm and age in Irish for one of her three subjects.

On the other hand, Klee & Fitzgerald (1985) found a low correlation of 0.26 between MLU and age in the earlier stages of their subjects' grammatical development.

This investigation was carried out for the three Iranian subjects to find out whether there is a correlation between MLUm and age. The result of this investigation in Persian revealed that there is a high correlation of  $r=$

0.86 between MLUm and age in Persian when the subjects are aged between 1;9 -3;2. It is interesting to note that this correlation was less significant for the older child and more significant for the younger child (Faeze, 2;4-3;2,  $r= 0.776$ , Mahdi, 2;2-3,  $r= 0.895$  and Shahrzad, 1;9-2;6,  $r= 0.918$ ). On the whole, the correlation between MLUm and age was high for the three children. However, this area needs more investigation since this research is, in fact, the first attempt in this language, and the sample is small.

#### 4.9 Conclusion

This investigation shows that MLU can be used to measure morphological complexity and productivity in early language development in a language which is typologically different from English. MLUm was found to be the measure which best assesses grammatical development in young Iranian children and it should be possible to use this measure as an intra-language device for comparison of the same child's language over time and between children acquiring Persian. It is preferred to MLUw and MLUs counts because these two latter measures underestimate and overestimate the child's linguistic ability, respectively. When calculated as shown above, MLUm provides a valid means of assessing early language development in Persian. This measure will be employed in Chapter 6 to order the children's samples at early stages of their language development. These samples will be compared and assessed at approximately equal MLU values to test the usefulness of this measure to Persian acquisition.

## Chapter 5

### **PLARSP: The design of a profile for assessing grammatical development in Persian**

#### **5.1 Introduction:**

The lack of a language assessment and remediation profile based on a body of data in Persian was one of the most important motivations for producing a grammatical profile for this language. To my knowledge, the assessment and remediation procedures which are used in Iran at the present time are simple translations of English profiles. However, this kind of practice is quite inappropriate since some structural differences exist between English and Persian which cannot be solved by simple translation. Crystal, Fletcher and Garman (1989) also state their objections against simple translation of the English profiles, such as Language Assessment, Remediation & Screening Procedure (LARSP), into other languages.

In order to adapt an English framework such as LARSP to Persian successfully, a corpus of normative data was collected and analysed and a set of descriptive categories was identified. These considerations appear to be essential for the adaptation of an assessment and remediation profile to other languages.

Furthermore, recent studies have drawn attention to the cross-linguistic study of language acquisition to distinguish universals from language specific strategies. In his adaptation of LARSP to Welsh, Ball (1988:55) also points out: 'The contrastive analysis of the same basic framework allows the detection of grammatical features specific to particular languages as well as those common to them.' An attempt has been made to use the same basic framework, which has also been applied to other languages. It should be borne in mind that this study does not aim to distinguish universals from language specific strategies. However, using the same framework will facilitate work on Persian acquisition, since there is insufficient information on this language's development.

## 5.2 Adaptation of LARSP to Persian:

### 5.2.1 Method of analysis:

Before adapting the LARSP procedure to Persian several other methods of assessing the children's language were considered. These were MLU, Assigning Structural Stage (ASS) (Miller, 1981), The Developmental Sentence Score (DSS) (Lee, 1974) and a transformational model. Comparisons of these methods have been made by Klee and Paul, (1981). As has already been done for Irish (see Hickey, 1987), the applicability of some of these methods to Persian was also tested.

MLU, which was discussed earlier, was found to be applicable to Persian. However, this useful measure is a limited general index and does not indicate a detailed grammatical analysis of language development in children.

The ASS method is a list of syntactic structures, each of which has been assigned to a particular stage of development. This analytical framework includes the 14 grammatical morphemes which Brown (1973) studied. This analysis is peculiar to English and needs some modification before being applied to other languages. For example it deals with auxiliary inverted questions and English morpheme analysis, which are not directly applicable to Persian.

The DSS procedure (Lee 1974) deals with complete utterances containing a subject and a verb so the early stages of language development can not be investigated with this method of analysis.

Finally, the generative grammar model, which has been recently revived as the Principles and Parameters Theory (Chomsky, 1981, 1986), is not appropriate for this study. Under the influence of Chomsky's revolution (1965), the attention was drawn away from the analysis of the utterances that people actually produced towards the consideration of linguistic intuition. In his view, a description of the speaker's linguistic knowledge far exceeded his or her performance. Although this proposal was important in emphasising the role of the innate language mechanism, it was a serious blow to researchers whose interest was in linguistic performance rather than

competence. However, with young children, it seems that they produce combinations of words without having any functional understanding of their constituent structure. They learn about constituent structure gradually as their language develops (Doroudian, 1979). Therefore, the collected data of children are restricted to the corpus of utterances since estimating a child's linguistic ability is a difficult task (see Fletcher, 1985: 1). In a transformational grammar model the intuition of the native speaker is taken into consideration while it is not possible to search the intuition of the child with regard to ambiguities. These ambiguities can be resolved only by referring to the context of the child's utterance. The transformational grammar model cannot identify constructions in speech samples in the absence of the intuitional data from the child, since this model pays attention to the competence of the 'ideal' speaker (see Crystal, Fletcher and Garman, 1989). Therefore, it is not compatible with the aims of this study. Furthermore, the technological revolution, in the 1980s and 1990s enabled the processing of the large language corpora by computer and 'restored the fortunes of linguistic data analysis by identifying numerous previously unknown features of language that could not have been discovered any other way' (Perkins & Howard, 1995). Perkins and Howard (1995), in fact, argue in favour of studying real language data, particularly in the case of disordered language and child language where one has no choice but to analyse linguistic performance. Perkins and Howard (1995) believe that the best way to study disordered language and child language is through the collection of spontaneous spoken discourse. Brown (1973) in his support of mere performance in the case of small children points out:

'Of course the data of performance have long ago been pronounced (Chomsky, 1964) an inadequate base for a grammar that attempts to represent competence or knowledge. I agree that it always is but I venture to say that not many people know how much can be milked from mere performance in the case of small children--especially conversational performance in which you can track relations between sentences. I have found the process of grammar writing a continual discovery of new things to look at, new aspects of the data that could tell me something about the knowledge in the minds of these three children.' (1973: 56)

The practice of collecting and transcribing data has a long history. The method was developed by Brown (1973) in the 1960s. This strong approach influenced Crystal and colleagues (see Crystal, 1992) to develop linguistic 'profiling' for both children and adults with impaired speech and language. They developed profiles for assessment and remediation of a patient's

grammatical system (LARSP), semantics (PRISM), segmental phonology (PROPH) and prosody (PROP) by collecting, transcribing and analysing a sample of spontaneous speech.

### 5.2.2 LARSP

The introduction of profiling linguistic features by Crystal, Fletcher and Garman (1976, 1981, 1989) and in particular the LARSP profile (Language Assessment Remediation and Screening Procedure) has opened a new era in the normal and clinical assessment of language. For example, Fletcher (1985) has used the framework to profile normal development while Gavin, Klee and Membrino (1993) have studied differences between groups of individuals with and without language impairment using the LARSP profile.

Furthermore, this procedure has been adapted to languages other than English with little difficulty, especially in applying the general structure of the chart. For example, LARSP has been successfully adapted to Dutch (Bol and Kuiken, 1980; Verhulst-Schlichting, 1982), German (Clahsen, 1983), Hebrew (Berman, Rom and Hirsch, 1982), Welsh (Ball, 1988) and Irish (Hickey, 1987, 1990).

The LARSP procedure, which provides a comprehensive description of contemporary English and is based on the Quirk, Greenbaum, Leech and Svartvik (1972) grammar, (since revised as Quirk, Greenbaum, Leech and Svartvik, 1985), allows a large and variable range of common English structures. As is the case with the Quirk grammar, the procedure has been organised in terms of levels (of sentence, clause, phrase and word) whose use is correlated with different communicative functions. The application of this procedure to a body of data produces a profile which is divided into seven stages. The various structures are plotted on the profile according to age equivalent. This profile is applicable from the early stages of language development. That is, it is linguistically comprehensive and does not require full clauses for analysis in the early stages of language acquisition. Bennett-Kastor (1988:92) also points out that '... LARSP is one of the most

comprehensive of the procedures, including as it does analyses of multiple linguistic levels'. The procedure involves analysing an utterance in context according to its function. In addition, the LARSP procedure indirectly takes into account the role of intonation in patterning language development. Although the aim of the procedure is remediation, it is constructed on normal development. It is summarised in the form of a single page profile chart (see the LARSP chart, P. 127). Utterances from a sample of 30 minutes conversation, which in normal children will usually result in 100 to 200 utterances (Crystal, Fletcher and Garman, 1989:87) are classified according to categories labelled on the chart. A brief review of the clinical use of the procedure is available in Beech, Harding and Hilton-Jones (1993). Most of the clinical work which has resulted from the use of this procedure has been summarised in Crystal (1991).

Section A of the LARSP chart covers those sentences which are either Unanalysed according to the grammatical conventions or Problematic in deciding their grammatical forms. The main purpose of this section of the chart is to save time for therapists analysing such utterances. Crystal, Fletcher and Garman (1989) consider three kinds of Unanalyzed utterance. They are (i) Unintelligible (unclear sentences that make a grammatical analysis impossible such as, poor articulation or recording). (ii) Symbolic noises such as mimic noises, e.g. of ambulances, horses, etc. (iii) Deviant utterances (abnormal sentence patterns, e.g. 'there man my kicked'). There are three kinds of Problematic sentences: (i) Incomplete sentences are those which are unfinished, e.g. the man is . . . (ii) Ambiguous sentences are those where it is unclear what grammatical analysis to assign to a sentence. For example, sometimes it would be unclear whether a two word utterance were to be taken as one (two word) or two (single word) utterances. (iii) Stereotyped sentences are those where all or part of a construction has been learned as a single unit, e.g. how do you do. Sections B, C and D on the chart pattern the grammatical interactions between the therapist and the patient.

LARSP locates the developmental sections (Stage I-VII) below the thick black line of the chart. These stages are identified according to the main grammatical processes that operate within them and the age equivalent. For example, one word utterances are listed at Stage I while two-word utterances are grouped at Stage II and Stage I runs from about 9 to about 18 months.

Crystal, Fletcher and Garman (1989) consider a  $\pm 6$  months age range rate of acquisition for each stage of language development because of individual differences. However, they believe that the order of emergence of grammatical patterns is constant.

Utterances are divided into Minor and Major on the acquisitional part of the chart. Minor sentences are those that are not productive. That is, these sentences do not combine with other elements according to grammatical rules, e.g. yes, oh. There are four kinds of Minor sentences. They are (i) Responses, e.g. yes, no (ii) Vocatives, such as 'mummy' (when used for calling) (iii) Other, such as, social functions e.g. hello (iv) Problems, such as, uncertain utterances. Major sentences, On the other hand, are those that combine with other elements and permit the application of grammatical rules. Sentence-structure analysis of major utterances includes exclamatories, Commands, Questions, and Statements. Each of these is analysed in more detail, particularly Statements which provide information on Clause and Phrase types as well as grammatical morphemes (Word column). The information in the Statements column is more extensive than for the other levels because they are used more frequently (Crystal, 1992). At Stage I sentences are restricted to one word and Statements cover four categories. They are (i) 'N' (utterances that seem to be used as nouns, e.g. boy, car, (ii) 'V' (items that seem to be used as verbs, e.g. walk, gone), (iii) Other, such as, adjectives and pronoun-like items, e.g. cold, him. The inverted commas around the categories indicate that clear syntactic patterns only emerge at Stage II and even the identification of word classes is tentative at this stage. The LARSP Stage I Questions and Commands columns contain the categories 'Q' which stand for question-words, such as 'where', 'what', (LARSP does not take into account the use of intonation as the marker of questioning). 'V' stands for verbs as imperatives, such as, 'stop!' Stage I Problems stands for utterances such as, the ambiguities between 'V' as Statements or 'V' as commands.

The LARSP Stage II age-range is between 1;6 and 2; The characteristics of Stage II sentences is that they contain varieties of two-element sequences. Therefore, at this stage the main analytical levels, Clause, Phrase and Word, are applied. The application of these analytical levels that starts at Stage II are carried out up to Stage V of the chart. Two transitional expansion stages are considered up to Stage V. These are indicated on the chart by transitional

lines between Stages II and III, and Stages III - IV. At these expansion stages Clause elements are expanded by Phrases. The first stage of phrasal expansion is the end of stage II where those phrasal expansions which take place in two-element clauses are plotted. Similarly, Stages III and IV expansions plot those phrasal expansions which take place in three-element clauses. These expansions include noun phrases, adverbial phrases and verb phrases. The examples below show the expansion of the subject noun phrase during the transitional stages:

Stage II-III expansions	my daddy	go
clause	S	X
X + S: NP	_____	
	Phrase	D N

Stage III-IV expansions	the fat man	go	home
Clause	S	X	Y
XY+ S: NP	_____		
	Phrase	D Adj N	

Since the processes of language development are mostly similar from Stage II to the end of Stage IV, at which clauses characteristically contain 4 or more elements, an example of each category at these stages is selected from (Fletcher, 1985:52-53) and is shown below:

Stage II	(under Command)	VX	go there, hit him, no eat, let go
			V A V O Neg V let V
	(under Question)	QX	what there, where him
			Q A Q ?
	(under Statement)	SV	he left, the red plane is landing
		VC	is happy, looks small, costs a lot, became a doctor
		VO	hit John, looked up the number
		SC	he tall, that man very sad
		SO	Daddy teeth, Peter ball
		AX	ran fast, Mummy in garden, happy now, no there
		NegX	no run, no there, no Daddy

<b>Stage III</b>	(under Command)	VXY	go there now, hit him hard, etc.
			V A A V O A
		let XY	let me ride
			let S V
		do XY	do stop that
			do V O
	(under Question)	QXY	where Daddy gone, why leave now
			Q S V Q V A
		VS	has Daddy gone, will you go there tomorrow
			V- S -V V- S -V A A
(under Statement)	SVC	Daddy is happy, John is a dentist, this bike weighs a ton	
	SVO	John slammed the front door	
	VCA	became a doctor last year	
	VOA	saw the man in the garden	
	SVA	John ran in the park	
		VOdOi	gave Nora a present
			V Oi Od
			gave a present to Nora
			V Od Oi
		NegXY	not Daddy go, not go there
		Neg S V Neg V A	
<b>Stage IV</b>	(under Command)	+S	you eat your breakfast
			S V O
	(under Question)	QVS	where has Daddy gone
			Q V- S -V
			why did you leave at six
			Q V- S -V A
		QXYZ	where Daddy gone now
			Q S V A
	(under statement)	SVCA	Daddy is happy now
		SVOA	John slammed the door yet again
AAXY		he left yesterday in a huff	
		now I'm going to wait in the pub	
	SVOdOi	George gave Nora a present	

George gave a present to Nora

An example of each phrase category at Stage II-1V is selected from (Crystal, 1992: 23,29,32) and illustrated below:

Stage II

DN	
(Determiner + Noun)	the boy, my house, that car
Adj N	
(Adjective + Noun)	nice box, big boy, three dogs
NN	
(Noun + Noun)	mummy's key, mummy daddy,
Pr N	
(Preposition + Noun)	in box, for John, under table
VV	
(Verb + Verb)	want go, wanna go, make jump
V part	
(Verb + particle)	come in, sit down, shut up
Int X	
(Intensifier + some other element)	very nice, really big, all dirty
Other, e.g.	
Pr Pron	
(Preposition + Pronoun)	to me, in that
Pr Adv (Preposition + Adverb)	in there, on here

Stage III

D Adj N	the big box, a nice car
Adj Adj N	nice big car, big red train
Pr D N	in the box, behind the table
Other	N Adj N (e.g. mummy's big car), Pr D Pron (e.g. in this house)
PronP	
(the Personal Pronouns), e.g.	he, we, it, they
Pron O	
(Other sorts of Pronouns), e.g.	him, them
Cop	
(Copula)	refers to the verb be
Aux M	

	(Modal Auxiliaries),e.g.	can/could, will/would
	Aux O	
	(the Other Auxiliaries),e.g.	he is going he has gone
Stage IV	NP Pr NP	the man in a hat, a little car with a red roof
	Pr D Aj N	in the big box, behind the red car
	cX	any phrasal construction introduced by a coordinating conjunction (c), usually and, as in: and me, and the boy
	XcX	boy and girl, a big man and a red car
	Neg V	he isn't going, he is not running
	Neg X	he has a pencil not a pen
	2 Aux	he may be going, I have been kicked
	Other,	e.g. Pr D Adj Adj N in that big red box
		D Adj Adj N a big fat pig

Stage V of LARSP, which runs from about 3 to about 3;6 years of age, shows the development of notable complex sentence formations. Therefore, the connecting words column is added to the LARSP chart at this stage. The most frequent word connector is 'and' so it is placed separately. Other conjunction words (c)-'or', 'but', etc are grouped together. Subordinating conjunctions (s), such as 'when', 'although', 'because', 'which', are also grouped together. Other connective words are listed under 'Other'. There are two classes of clausal connection: Coordination (Coord.) and Subordination (Subord.). The most detailed of these are given under Statements. The examples below are selected from (Fletcher. 1985:53-54):

Stage V	(under Statement)	Coord 1
		John kicked the dog and ran up the road
		S V O and V A
		Coord 1 +
		John kicked the dog but missed the cat and ran up the road
		S V O c V O and V A

Subord 1.1+ = Clause: A1, 1+:

John kicked the dog when he came to amuse the children

S	V	O		A		A		
			s	S	V	s	V	O

Subord A 1 is a clause containing an adverbial element which is itself a clause and marked as subordinate by the use of *s*. In the case of Subord A 1+ a clause contains at least two adverbial clauses. The Subordinate Clause may be Subord S ( a clause containing a Subject element which is itself a clause), Subord C ( a clause containing a Complement which is itself a clause), Subord O ( a clause containing an Object which is itself a clause) or comparative (a clause containing a grammatical marker of comparison).

Stage VI runs from about 3:6 to 4:6 years. The symbol + on the chart stands for new types of construction while the symbol - stands for errors made as the child completes learning the constructions. This stage focuses on what the child cannot do rather than what he or she can do. However, even in English a limited amount of research has been done into this age range of acquisition and only a small selection of new constructions is cited on the chart. Stage VII has also been little studied in acquisition research and LARSP Stage VII has little real assessment value. LARSP lists only three general acquisitional topics at this stage, discourse, syntactic comprehension and style.

Since this study aims to examine the development of Iranian children's language system from the early stages of language development to Stage V, during which the most grammatical patterns emerge, a LARSP type of analysis was considered. In this approach, in order to take into account the child's utterance in context according to its function, video recording was preferred. In this investigation most attention is focused on the developmental part of the chart. This policy follows Fletcher (1985) who also considered the acquisitional part of the LARSP chart to plot the normal language development of his subject.

We should also bear in mind that the Persian profile reflects the language development of only three Iranian children while the LARSP procedure itself is based on a large number of subjects and plots a more complete picture of English children's language development.

Although this study is the first attempt to profile the language development of Iranian children, it is a complete study in itself and follows Brown's (1973) statement that the first steps are hard but important.

### 5.3 Persian:

Recall that studies by traditional grammarians as well as recent works in the field of linguistics have considered Modern Persian to be mostly a verb final language, for example Farrokhpey (1979), Dabir-Moghadam (1982), Samiian (1983) and Karimi (1989).

In adapting the LARSP profile for Persian one faces several problems. The most important of these are firstly, the lack of developmental data concerning the language development of Iranian children even in the recent work of Slobin, 1992. The only study belongs to Doroudian (1975) who investigated the acquisition of Persian and English in her bilingual child. However, the main focus of the study is on the acquisition of English rather than Persian. Secondly, the lack of a contemporary Persian grammar to give sufficient information about the varieties of structural patterns in this language. However, even without this information it is possible to distinguish between some universals and language specific characteristics without great difficulty. For example, Ball (1988) and Hickey (1987) note that the LARSP distinction between one-word utterances and two word stages will hold for Welsh and Irish as well. Also sections A-D of the LARSP chart are not language specific. These are also true in the case of Persian. Therefore, the same initial sections (A-D) were included in the Persian profile, as well. The PLARSP chart is established according to the hypothesis that the assignment of constructions in each stage of language development is based on the number of elements. In this study only major Persian utterances which were also applied to the MLU measure were used. Analysing Persian data with LARSP categories showed that there were many features common to both languages. In addition, specific categories were identified in Persian.

The following pages focus on the acquisitional part of the Persian chart. This chapter shows a general picture of the children's language development. In his application of LARSP to the development of a normal 2-3 year old

child, Fletcher (1985) omitted Sections A-D of the LARSP chart since these categories are directed towards remediation. This study mostly follows the same policy and the discussion will be organized as follows:

- 1) brief explanation of general plotting of the chart
- 2) constructions in each of Stages I-V and brief explanation of Stages VI-VII
- 3) word level
- 4) conclusion

## 5.4 PLARSP

Sections A-D of the LARSP profile, as explained above, are reproduced on the Persian chart, since they are not language specific. For the same reason the Minor/Major sentence distinction is retained, as are the distinctions between Command, Question and Statement, and Connectivity, Clause, Phrase, Word and the developmental Stages I-VII. The age column was not reproduced on the Persian chart since it needs more exploration. Ball (1988) and Hickey (1987, 1990) did not mention the age equivalent for each stage of their Welsh and Irish profiles for similar reasons. In the case of Persian the complex patterns of inflectional morphology cannot be related to an English equivalent. The stages in the Persian version of the LARSP chart, henceforth 'PLARSP,' are tentatively assigned according to the number of morphemes, in the case of inflections, or words per utterance, since it is clear that the number of elements is relevant to the child's language development. Moreover, apart from this study, there is no other information on the order of emergence in Persian. The following criteria for assigning patterns to Clause, Phrase and Word levels were considered. Persian is a 'pro drop' language and the inflections play both syntactic and morphological roles in this language. Therefore, they are not only listed under the Word column, but also under the Command and Statement columns, as well. On the other hand, prefixes function morphologically in Persian and they are only placed under the Word column in the study. Concerning the late acquisition of Compound verbs in the Iranian children's data, this category without bearing any inflections was placed under the Stage II Clause column and analyzed as N/AdjV under the same stage Phrase level. The object marker *o/ro* was placed under Stage II Phrase and Word columns. In the case of negative utterances, which are mature in Persian after Stage II, the negative prefix *na-/ne-* was placed under

the Word column and the rest of the utterance, like any other Statement utterances, was placed under the Clause column. This decision was made because the negative utterances have simple constructions in Persian and the prefix *na-/ne-* is added to the beginning of the modal auxiliaries or verbs without using any form of auxiliaries and they are acquired after stage II in Persian. Auxiliaries in the form of inflections are placed under Phrase and Word levels.

#### 5.4.1 Stage I: Minor

Minor utterances cannot be analyzed syntactically and their length was not taken into account. Some of these utterances were classified under Responses which include *na* 'no' in Persian. The Persian 'yes' at this stage is normally expressed by *ha:n*. *ha:n* also means 'what' when it is uttered with rising intonation. Vocatives were used for utterances such as calling *ma:ma:* *ba:ba:* and *da:da:* 'Mummy,' 'Daddy' and 'brother.' In Persian children use the expression *da:da:* to refer to everybody, particularly their brothers and sisters, at this stage.

#### 5.4.2 Stage I

Stage	I	Major	Comm.	Quest.	Statement			
			'V'	'Q'	'Neg-V'	'V'	'N'	'other'

The structures listed at LARSP Stage I were also listed in the PLARSP chart. However, the structure 'Neg-V' is added at this stage in the 'statement' column covering the use of *nist* (Neg-be-Pres.). It is clear that *nist* is a formula at this stage (i.e. since no novel combinations were observed). Fletcher's (1985:19) interpretation of Sophie's negative utterances was based on a 'complex interplay of syntax, lexis, intonation and context'. This is the same in the case of negative *nist* in Persian. *nist* is usually used by Iranian children when something or somebody is not present. It is also sometimes used as a general negative reply. The following examples are selected from Mahdi's and Shahrzad's data illustrating these:

- (a) Use of *nist* when somebody is not present: (Mahdi: 2;2)

MAH: *xa:le ku?* (aunt where)? 'where is aunt?'

DAD: *nist.* 'she is not'

MAH: *nist?* 'she is not?'

- (b) Use of *nist* as a general negative reply: (Mahdi: 2;2 does not want to answer his mother's questions anymore)

GOL: *kif-et ku?* (bag your where)? 'Where is your bag?'

MAH: *xune.* 'home'

GOL: *kodum ota:q?* 'which room?'

MAH: *ota:q.* 'room'

GOL: *ha:n?* 'what?'

MAH: *nist.* 'it isn't' = 'I don't know'

or (Shahrzad's father jokes with Shahrzad. He says that her mother is his mother and not hers):

DAD: *ma:ma:n-e man-e* (mum-poss marker my-is) 'she is my  
mum'

SHR: *nist* 'she isn't'

Similar to LARSP, negatives are grouped with statements in Persian. As explained before, the reason for this is that the Persian negative system is not complicated and the prefix *ne* - or *na* - is added to the beginning of the modal auxiliaries or verbs without using any form of auxiliaries.

Apart from the emergence of negative *nist* at this stage, the other difference between the Persian and English LARSP charts is the two element command system in Persian. The presence of prefix *be* -/bo - /biy- in the Persian command system is observed from the early stages of language acquisition in the children's data, e.g. *be-de* 'give' and *be-ya:* 'come,' since simple verb command forms always appear with a prefix in Persian.

Similar to LARSP, the inverted commas around the terms reflect the controversy in the literature as to whether utterances at stage I can be called 'sentences' (see Crystal et al., 1989). Similar to Hickey's (1987) work, analysis in terms of S,V, C,O,A was avoided since that would involve treating utterances at this stage as elliptical, which would overestimate the child's linguistic ability. Question utterances such as *ku* , 'where', are listed in the 'Question' column. It was found that *ku* 'where' emerged as the first question word in the data of the participants. Brown (1973) and Doroudian (1975) also reported that the first question words in the speech of their subjects were 'where'. Generally, as noted in Chapter 2, in Persian yes/no questions as well as WH questions are expressed using intonation. There is no change in the structure of sentences either for yes/no questions or K-word questions in this language. That is, no inversion or use of an auxiliary is involved in their formation. In PLARSP, since yes/no questions do not have a particular structure they are treated like affirmative sentences and are placed at clause level. As LARSP does not take into account the role of intonation in forming questions, it is also possible to follow Crystal et. al's (1989:62) suggestion of adding a separate 'Other' section to the chart to deal with this phenomenon in Persian. 'V' utterances such as *gerft* 'caught' and *zad* 'beat' are listed under the Statement column. It is worth noting that all of the verbs in the Statement column appeared in the form of simple past third person singular, the only construction in Persian that has 'zero' inflection. Generally, the simple past is formed by the past stem which is inflected according to person and number and the third person singular has no ending. That is, simple past verbs, particularly the third person singular, are the least formally complex of Persian verb constructions emerging at this stage. The utterances such as *ma:ma: , ba:ba:* 'Mum', 'Dad' are listed under 'N'. PLARSP lists the words like *ax*, 'bad' dirty', *bad* , 'bad' etc. under the 'Other' category; when words are used for functions other than the identification of objects or change they are placed under 'Other'. LARSP 'Problems' may stand for utterances which are, for example, ambiguous between 'V' as Statement or 'V' as Commands. This is not the case in PLARSP since these two categories are completely different in Persian, as explained above. PLARSP 'Problems' may stand for any other ambiguous utterances, e.g. utterances in context where it might or might not be past.

## 5.4.3 Stage II:

Comm.	Quest.	Statement				
		Clause			Phrase	
VX	QX	SV	VI	Other	DN/Pron	Pron
		C(V)	SC		NN	Aux/I
CompV		SO	XNeg		PrN/Pron	Adj/NV
		XA	CompV		NAdj	Obj/O/ro
		OV	VV		IntX	Other

There are more divergences between LARSP and PLARSP at this stage which Brown and Bellugi (1964) characterize as the 'telegraphic' or 'two-word' utterance stage. Under Command, the Compound V (most compound verbs are formed by the combination of substantives, usually adjectives/nouns, + simple verbs in Persian) such as, *pa:sho or boland sho* 'get up', constitutes the first main difference between the charts. In this column, the *be-/bo-/biy-VX* category for utterances such as *be-de man* 'give me' is seen. The 'Question' column is identical in the two charts at this stage. The structure QX represents the children's frequent use of *xa:le ku*, (aunt where) 'where is aunt' or *ku amu* (where uncle) 'where is uncle'. The question word *ku* 'where' occurred frequently at this stage. One reason for this is that this construction does not require a verb even in adult utterances. That is, this construction is the least complex among the question structures in Persian.

At Stage II Statements one of the main differences from LARSP is the change in word order. VO, AX, VC and NegX have become OV, XA, C(V) and XNeg because the canonical word order in Persian is (S)(O)VI. This difference does not mean that LARSP constructions of Stage II have a fixed order since word order in English is somewhat inconsistent up to about two years. The development of negation in the children at this stage accords to Bellugi's (1967) first stage, in which the child produces negatives external to the sentence. Mc Neill (1970) found this structure not only in English but in a

number of languages and concluded that negative structure at early stages was universal. However, as explained before, negation in Persian has a simple construction and is present in Iranian children's utterances after this stage. Hence the negative prefix is placed under the Word column and the rest of the sentence was analysed like affirmative utterances after Stage II. The following examples for each category under PLARSP clause level at Stage II are selected from the data:

Stage II- PLARSP Clause Level

SV	<i>in zad</i> 'this beat'	XA	<i>raft pele</i> 'went stair'
C(V)	<i>sard-e</i> 'cold is'	OV	<i>sha:mpo gereft</i> 'shampoo held'
SO	<i>da:da:sh man</i> 'brother me'	VI	<i>xord-am</i> (ate I) 'I ate'
SC	<i>Madi bad</i> 'Mahdi bad'	CompV	<i>dast kard</i> (hand did) 'touched'
XNeg	<i>hapu na</i> 'dog no'		
VV	<i>raft xa:bid</i> 'went slept'	Other	Voc + X <i>ma:ma: man</i> 'ma:ma: me' = 'ma:ma: give me' or any two element ambiguous elements

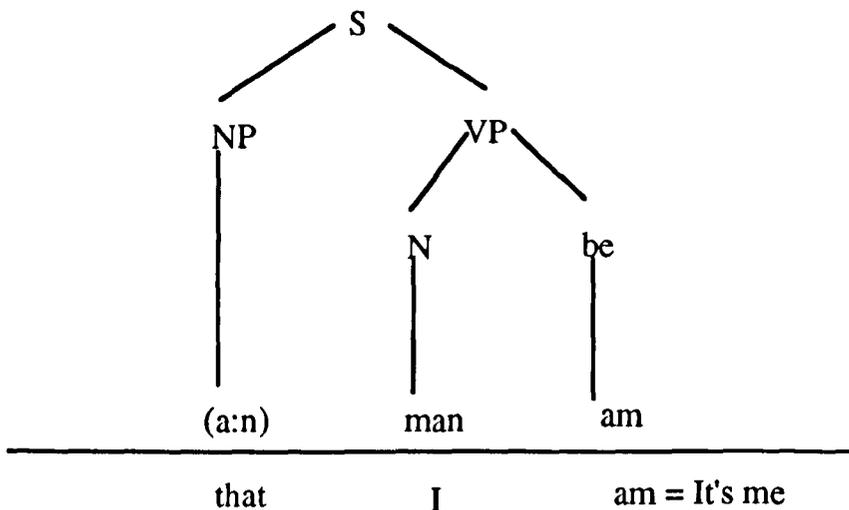
Other differences from the LARSP chart are firstly, as is indicated above, V appears in the form (V) in C(V) category. The reason for this is that the occurrence of 'verbless' type utterances in Persian grammar in the present

tense after the complement is in fact the most commonly-encountered form, e.g.

<i>ax-e</i>	<i>sard-e</i>
bad (is) it	cold (is) it.
C (V) S	C (V) S

Since Persian is a pro-drop language, the C(V) pattern was used in preference to the CS at this stage. This separates the C(V) form from other forms particularly the SC category at this stage. In addition, the negative forms for the utterances such as *sard-e* and *ax-e* are *sard nist* ('cold neg-is' 'it is not cold') and *ax nist* ('bad neg-is' 'it is not bad'). That is, the negative form appears with the full copula and the subject suffixes in these constructions.

In addition, Windfuhr (1979) gives a good example of 'zero copula' in Persian. He classifies person agreement as the verb 'to be' in the following example:



Windfuhr observed that these kinds of sentences, C + person agreement, indicate a colloquial tendency of the verb to be in the present tense, e.g. *am* 'it is me,' the first person agreement, is regarded by Windfuhr as the copula 'am' in the following example:

*man irani (hast) am*

I Iranian (am)

'I am Iranian'.

Ingham (1978: 536) also points out 'In those (utterances) marked 'non-verbal' the notion 'to be' is expressed by suffixing the subject pronoun affixes to the complement as in the adult language.'

It is interesting to note that the only person agreement which emerges after the complement at this stage of Iranian children's language acquisition is the third person singular agreement, *e / ye*, which is regarded as the copula.

As seen in the chart, the new categories VI and CompV are also included in the Clause column at this stage. In the case of VI, it was found that the emergence of the inflections *-am* and *-i* are relatively frequent for utterances such as *raft-am*, 'went I' and *did-i* 'saw you'. Since Persian is a subjectless language it would be necessary to list inflections in both syntactic and morphological levels of the PLARSP chart. It should be borne in mind that the C(V) and VI categories have both syntactic and morphological functions in Persian and they should not be regarded similar to English '-ing' and '-ed' where the suffixes have only morphological roles. CompV is listed in this column since the majority of the verbs are formed mostly by the combination of N/Adj + simple V in Persian, the so-called compound verbs (CompV). At this stage Iranian children use Adj/N+ simple verb, past tense, third person singular (the only verb construction that receives 'zero' inflection). This category was placed under both Clause and Phrase columns in Stage II due to its later emergence than Stage I categories in Iranian children's data. The following examples are from the children's data:

*qat kard*

(cut did)

CompV

's/he disconnected'

---

N V

<i>xara:b kard</i>	
(ruin did)	's/he broke'
CompV	
<hr/>	
N	V
<i>dast kard</i>	
(hand did)	's/he touched'
CompV	
<hr/>	
N	V
<i>a:mpul zad</i>	
(injection beat)	's/he did the injection'
CompV	
<hr/>	
N	V

The VV category was listed under Clause instead of the Phrase level since, in contrast to English, Persian is a pro-drop language and verbs are grammatically well-formed and do not appear in the form of bare roots (see Hyams, 1992). That is, the VV category is produced for utterances such as, *raft xa:bid* (s/he went slept) 's/he went to sleep.' Such utterances are grammatically complete and admitted in Persian.

Other differences from the LARSP chart are seen in the Stage-II phrase categories AdjN, NN and possessive pronoun determiners which appear in the following order:

NAdj	<i>video bozorg</i>	NN	<i>ma:shin Madi</i>
	(video big)		(car Mahdi)
	'big video'		'Mahdi car'
ND	<i>pa:-m</i>		
	(foot-my)		
	'my foot'		

It is often difficult at this stage to decide whether utterances such as *mahdi bad* or *ma:ma: xub*, 'Mahdi bad' or 'mummy good' should be classified as SC or NAdj since the modifier marker, *e*, is absent in this stage of Iranian children's language development. Crystal, et al. (1989) note that such utterances are often ambiguous even in English where normal word order distinguishes them. This is more difficult in the case of Persian since word order in this language is SOV. Crystal et al. recommended the analysis of stress in resolving the ambiguity. This was found to be helpful in Persian. Like LARSP which labels nouns expressing possession as NN at this stage, PLARSP also lists genNN under the NN category. To economize the PLARSP chart and avoid repetition, the categories which are different in the order of their constituent elements are placed under one category. For example DN/Pron or ND is listed under DN/Pron on the PLARSP chart. The auxiliary *budan* 'to be' in the form of third person singular, present tense for utterances as *raft-e ba:la;* (went-aux&3s up) 'has gone upstairs' was more frequent than the other auxiliaries in the children's data. This form has the least complex structure among Persian auxiliaries and generally, the inflection *-e* (present, third person singular) after the past root is regarded as auxiliary. The present, third person singular form of the auxiliary (*budan*), *hast* is usually omitted in colloquial Persian. This inflected auxiliary (Aux/I) is placed in both the Statement and the Word columns. The other new categories, the object marker *ro/o* for utterances such as *in-o be-de* (this-Omarker imp-give) 'give this' and Adj/NV for the utterance *xara:b kard* (ruin did) 's/he broke' were also included in this column.

An example of each Stage II Phrase construction is given from the children's data:

#### Stage II- PLARSP Phrase Level

DN/Pron <i>in a:qa:</i>	Pron	<i>man</i> 'I', <i>in</i> 'this'
'this man'	Aux/I	<i>masoud keshid-e</i>
<i>ma: dota:</i>		(Masoud drew-Aux)
'we two'		'Masoud has drawn'

		Adj/NV	<i>xara:b kard</i> (ruin did) 's/he broke'
or			
ND	<i>pa:-m</i> (foot-my) 'my foot'	Obj/O/ro	<i>in-o be-xun</i> (this-O marker imp-read) 'read this'
NN	<i>ma:shin Madi</i> (car Mahdi) 'Mahdi's car'		
PrN/Pron	<i>to liva:n</i> 'in glass' <i>be man</i> 'to me'	Other	<i>man am</i> 'me too' <i>dar ovord</i> 'took off'
NAdj	<i>video bozorg</i> (video big) 'big video'		
IntX	<i>xeili seft</i> 'very hard'		

As is seen above, pronouns and the object marker *o* or *ro* are also listed in this level. Pronouns in Persian have very simple structures. That is, there is no difference between subject, object and possessive pronouns when they are not in the form of inflections. For example, the pronoun *man* 'I' can be used as subject, object and possessive pronouns as seen below:

<i>man</i>	<i>xord-am</i>	<i>kif man- o be-de</i>
(I	ate-I)	(bag my-omarker imp-give)
S	VI	O V
		<hr/>
	N	D-Omarker 'give my bag'

*man am be-bar*  
 (I too imp-take)  
 O A V  
 'take me too'

Therefore, unlike LARSP which makes a distinction between the personal pronouns (P) and other sorts of pronouns (O), PLARSP lists them under Pronouns only. The object marker *o* or *ro* was used for the utterances such as *in-o be-de* (this-object marker imp-give) 'give this.'

The above table shows that the LARSP phrase categories are retained in PLARSP, too. However, the Vpart category in PLARSP for utterances such as *dar ovord* 'took off' is placed under 'Other' since it is a rare Persian construction. Subject, object and possessive pronouns are the same in Persian and they are listed in Stage II Phrase level.

#### 5.4.4 Transitional Stage II-Stage III: Expansions

At the transitional StageII-StageIII the children's utterances move from the 'telegraphic' stage, two word utterances, to three. Generally, two processes of sentence formation occur in LARSP at this stage. Crystal et al. (1989) point out that one of these processes is the blending of clause and phrase structure, which were separate at stage II and the other is the development of new patterns of clause structure. For example, at clause level Adam + hit and hit + ball can now be combined into Adam + hit + ball (Brown 1973:183). At the phrase level hit + ball may now be expanded to hit + Adam ball (Peters, 1986:318). This is also true in Persian. The following examples demonstrate these processes.

Stage II	Clause level	Phrase level
example:	<i>man-e</i> (mine-is) C (V) 'it is mine'	<i>ma:shin man</i> (car my) N D 'my car'

## Stage III

example: *ma:shin man - e*

C/expansion      *mashin man - e*      'it is my car'

(car      my-is)

          C      (V)

---

N      D

The expansions also include noun phrases, adverbial phrases and verb phrases, e.g.

S expansion      *in ma:ma:n kard*      'this mum did'

(this Mum      did)

          S      V

---

D      N

A expansion      *raft ru hava:*      'went in sky'

(went in sky)

V      A

---

          Pr      N

V expansion      *raft-e xune*      'has gone home'

(gone home)

V      A

---

v      Aux

## 5.4.3 Stage III:

Comm.	Quest.	Statement	
		Clause	Phrase
VXY		XVI XC(V)	<i>mal</i> Cop
		VIso XCompV	Adj/NVI
		SOV Other	Other
CompVX		CompVI	DNAdj
		SVA	PrDN/Pron

At stage III the command *be-/bo -/biy-/VXY* category

*potoqa:l man be-de*  
 (orange me imp-give)  
 X Y V  
 'give me an orange'

is similar to LARSP and the prefix *be-/bo -/biy -* is listed in the word column. The children produced this prefix later than some suffixes. Clark and Berman (1984) also found that English and Hebrew-learning children find suffixes easier than prefixes. This is the same in Persian and suffixes appear productively earlier than prefixes in this language. For example, while the person inflections appeared in novel constructions in the children's data at Stage II, the prefix *be-bo-/biy-* begins to be produced productively at Stage III. We should bear in mind that there is no verb equivalent of 'let' in Persian. This notion is indicated by adding the prefix *bo -/be-/biy-* to the present root, plus inflections at the end. Sometimes this notion appears in compound verbs without the prefix. These categories are recognized from Statement by intonation. For example, the utterance below, *a:da:ms be-xor -im*, can be interpreted as SVI 'we eat chewing gum' or 'let's eat chewing gum.' Therefore, since PLARSP, like LARSP, does not take intonation into consideration, these utterances are listed under Statement only. The following examples are selected from the data:

*be -/ bo -/biy-VIX*     *a:da:ms be-xor-im*  
 (chewing gum subj- eat - we)  
 X                    VI  
 'Let us eat chewing gum'

CompVI                    *xara:b kon-im*  
 (ruin do-we)  
 Comp VI  
 \_\_\_\_\_  
 N                    V  
 'Let us break down'

At this stage the 'do' category is not appropriate for Persian. The CompVX category e.g.

*pa:ra-sh kon*  
 (tear-it do)  
 Comp X V  
 \_\_\_\_\_  
 Adj I                    V  
 'tear it'

is also included in this column. Recall that compound verbs are formed by the combination of adjectives/nouns + simple verbs in Persian. WH questions correspond to the adult model at this stage since, as explained earlier, there are no complex question structures in Persian.

New categories at the stage III clause level are mainly extensions of the categories introduced in the previous stage. Some of these extensions are in the form of inflections. For instance, the XVI category represents utterances such as, *in mi-shkan-e* (this pres-break-it) 'this breaks' (SVI), *unja: raft-am* (there went-I) 'I went there' (A VI) and *sham xord-am* (dinner ate-I) 'I ate dinner' (OVI). The COMPVI category for utterances such as, *harf mi-zan-im* (talk pres-beat-we) 'we are talking' as well as the VIso (Verb + Subject Inflection + Object Inflection) category for utterances such as *gereft-am-esh* (caught-I-it) 'I caught it' are also listed in this level.

The SVA category such as *Mahdi raft Iran* 'Mahdi went to Iran' also includes to the utterances with the indirect object since this structure does not occur in Persian, a preposition always being necessary as illustrated below:

*soba:ne mi-ya:r-e bara:-m*  
 (breakfast pres-bring-she for-me)  
 'she brings breakfast for-me'

*bara:-m soba:ne mi-ya:r-e*  
 (for-me breakfast pres- bring-she)  
 'she brings me breakfast'

Ball (1988) also classified comparable structures in Welsh as Adverbials.

XC(V) is another construction which is different from LARSP. This structure is the extension of C(V) of the previous stage. This is seen in:

*in ma:shin-e*  
 (this car is)  
 S C (V)  
 'this is a car'.

The emergence of the subject for such constructions at this stage confirms that the selection of the notion (V) at Stage II instead of S (see Crystal et al.'s suggestion on Hebrew, 1989) would be more suitable for Persian. XCompV is the expansion of the Stage II CompV category. This is illustrated below:

*mamad xara:b kard*  
 (Mamad ruin did)  
 S CompV

---

N V  
 'Mamad broke down'

As is seen above, the Subject (X category) appears with the past form third person singular of the compound verb ( the only form that takes no inflections).

The SOV category is used for utterances such as *ma:ma:ni dastma:l bast* , (Mum scarf fastened) 'Mum fastened a scarf' .

The PLARSP three element Clause structures are illustrated below:

### Stage III-PLARSP Clause Column

XVI	<i>in mi-mhkan-e</i> (this pres- break-it) S V I 'this breaks'	VIsIo	<i>gerft-am-esh</i> (caught-I-it) V Is Io 'I caught it'
	or		
	<i>mi-r-im b irun</i> (pres-go-we out) V I A 'we go out'	SOV	<i>ma:ma:ni dastma:l bast</i> ( mum scarf fastened) S O V 'Mum fastened a scarf'
	or		
	<i>cha:ei xord-am</i> O VI (tea ate-I) 'I drank some tea'	CompVI	<i>harf mi-zan-im</i> (talk pres-beat-we) 'we are talking'
SVA	<i>Mahdi raft Iran</i> 'Mahdi went Iran'	XCompV	<i>in xara:b kard</i> (this ruin did) 'this broke down'
XC(V)	<i>un fil-e</i> (that elephant-is) 'that is an elephant'	or	SCV
			<i>pa:-m ba:la:- st</i> (foot-my up-is) 'my foot is up'

Other e.g. utterances with two adverbs or XCV utterances

On the phrase level, PrDN/Pron DNAdj are listed in PLARSP. The copula *budan* 'to be', particularly *hast/-st* 'is' (third person singular form, present), for utterances such as *pa:-m bala;-st* (foot-my up-is) 'my foot is up' and the genitive marker, *ma:l* such as *mal man-e* (mal mine-is) 'it is mine' are listed in this level. The new category Adj/NVI for utterances such as *xara:b kardam* (ruin did I) 'I broke down' is added. Each phrase category at Stage III is seen below:

### Stage III - PLARSP Phrase Column

Adj/NVI	<i>xara:b kard-am</i> (ruin did-I) 'I broke down'	Cop	<i>pa:-m ba:la st</i> (foot-my up is) 'my foot is up'
PrDN/Pron	<i>to in liva:n</i> 'in this glass '	<i>ma:l</i>	<i>in ma:l to</i> (this gen/ <i>ma:l</i> you) 'this for you'
Or			
Pr ND	<i>be pa:-m</i> (at foot-my) 'at my foot'	Other	<i>svar:r ma:shin ba;ba;</i> (ride car dady) 'daddy's car ride' <i>in to in</i> 'this inside this'
DNAdj	<i>in babr e vahshi</i> (this tiger <i>ezafe</i> wild) 'this wild tiger'		<i>az to in</i> 'from inside this'

#### 5.4.6 Expansions:

Expansions follow exactly the same processes as Stage II- Stage III. The definitions are taken from Crystal, et al. (1989). The examples below from the children's data illustrate the expansions:



XY + V: VP A 3-element clause has its verb expanded by a verb phrase, the remaining elements being referred to as X and Y respectively, e.g.

V:VP + XY (=XY + V:VP)

example:           *mahshid ham omad-e bud*  
                           (Mahshid too came-PP Aux)  
                           X           Y           V:VP

\_\_\_\_\_

V           Aux

'Mahshid had come too'

XY + A:AP A 3 element clause has its adverbial expanded by an adverbial phrase (or clause), the remaining elements being referred to as X and Y respectively, e.g.

A:AP + XY (=XY + A:AP)

example   *ma:ma:ni goza:sht to tax*  
                   (Mummy put in bed)  
                   X           Y   A:AP  
                   'Mummy put in bed'

## 5.4.7 Stage IV

Comm.	Q	Statement		Phrase	
		Clause			
+S		SOVI	Complex	Adj/NIVI	
		AOVI	SVIsIo	PrDNAdj	
VXY+		XCompVI		cX	Aux/M <sub>o</sub>
CompVXY+		SAVI	Other	XcX	Other

At stage IV commands +S such as, *bacha: beya:n tu* 'children come in' and *be-/bo -/biy- XYV+* categories for utterances such as

*in-a: ro be-xun*  
 (this-pl object marker imp-read)  
 X Y V  
 'read these'

are retained and the prefix *be-/bo-/biy-* is listed in the word column, as mentioned earlier. The *CompXYV+* category such as

*chasb-o pa:ra-sh kon*  
 (tape-object marker tear-it do)  
 X -Y Comp-Z V  
 'tear the tape'

is grouped in this column. There is no tag structure in Persian, instead expressions like *mish-e* (possible is) 'Is it possible?' and *mage na* (so no) 'isn't it?' are alternatives to express this notion. These tag-like questions are rare but their structures are similar to the Statement categories. Therefore they are listed under Other in this level.

At Stage IV Statement again one of the main differences from LARSP is the presence of inflections. At this level, the (SVIsIo) category contains both subject and object inflections and is the expansion of VIsIo of the previous stage. The new category Complex is for utterances with an auxiliary or modal auxiliary such as *mi-xa-m be-bor-am* (pres-want-I subj-cut-I) 'I want to cut'. Most modal auxiliaries and auxiliaries in Persian receive the same

inflections that main verbs receive and, in fact, these sentences have two clauses in this language. Therefore, these utterances are listed under Complex in this level.

An example of each clause category is shown below: (the examples are selected from the children's data)

#### Stage IV- PLARSP Clause Level

SOVI <i>ax da:r- am man</i> (toilet have-I I) 'I need toilet'	XCompVI <i>da:bo das zadam</i> (soap hand did-I) 'I touched the soap'
AOVI <i>sa:at nama:z-et-o na-xund-i</i> (hour pray-your-omarker neg-read-you) 'You didn't do your pray that hour'	SVIsIo <i>man mi-bin-am-et</i> (I pres-see-I-you) 'I see you'
SAVI <i>ma:ma:n bar- a:m mi-xar-e</i> (Mum for-me pres-buy-she) 'Mum will buy for me'	Other tag-like questions & structures with five and more elements
Complex <i>mi-xa:-m be-bor-am</i> (pres-want-I subj-cut-I) 'I want to cut'	<i>man inja: pishe da:da:sh-am be-shin-a</i> (I here next brother-my pres-sit-I) 'I sit here next to my brother'

Structures with five or more elements and sequences of adverbial are counted under 'Other.'

Stage IV Phrase categories are mainly the expansions of the categories introduced at the previous stage. The Adj/NIVI category represents utterances such as *xara:b-esh kard-am* (ruin it did I) 'I broke it down.'

The phrase structures such as PrDNAdj *az un-a: gerda:lu sefid* (of that-pl round white) 'of those round white' and cX *dige man nusha:be* 'also me drink' and XcX *dast o surat* 'hand and face', *mohammad va mahdi* 'Mohammad and Mahdi' are the same as the English stage IV categories. However, the NPPrNP and Neg X categories were rarely used by the children under the

investigation and placed under 'Other'. The 2AUX category on the English chart is omitted as inappropriate. That is, two auxiliaries rarely appear in one construction in Persian.

The new categories, modal auxiliaries (Aux/M) and other auxiliaries (Aux/O), are grouped in this level. Modal auxiliaries such as, *momken budan* 'may' = colloquial *mishe* e.g. *mishe be-za:r-am ?* ( may sub-put-I) ' may I put?' are listed in the phrase column at this stage. Three modals, *tava:nestan* 'be able to', *bayestan* 'must' and *momken budan* 'may', exist in Persian (Farrokhpey, 1979). These modals require subjunctives in sentences embedded in them. Most of the modal auxiliaries occurred with the subjunctive form of the verbs in the children's data, e.g.

*mi-tun-e be-r-e madrese*  
 (pres-be able-she subj-go-she school)  
 'she can go to school'

Generally, Persian possesses two separate forms of present verbs. These forms always occur with a prefix. The prefix *mi-* always precedes the verbs except for subjunctives and imperatives which appear with the prefix *be-/bo-/biy-*. That is, a prefix is present in the construction of simple present verbs in Persian all of the time. Therefore, the children used the modal auxiliaries with the subjunctive form at emergence. There were a number of errors where the children produced the modal auxiliaries with *mi-* preceding verb forms instead of using the subjunctives with the prefix *be-bo-/biy-*. But no cases were found of the children producing modal auxiliaries with the simple verb roots.

It seems plausible that the appearance of modal auxiliaries and auxiliaries later in Persian than in English language development is due to the greater complexity of these forms in Persian. For example, the modal auxiliary constructions, *momken budan* 'may' and *tava:nestan* 'can', are similar to Persian complex sentences.

Auxiliaries are not common in Persian. According to Farrokhpey's (1979) study, Persian auxiliaries are *budan* 'to be', *shoda:n* 'to become' and *xa:stan* 'to want'. However, the auxiliary 'xa:stan' in the form of *xa:h* (future form)

did not appear in the samples of the children's speech and it is rarely used in the colloquial adult language. In this stage of the Iranian children's language development, the other forms of *xa:stan* 'to want', as main verbs, for utterances such as *mi-xa:-m peyda: kon-am* (pres-want-I finding do-I) 'I want to find' emerged and were listed under Complex in the clause column. The auxiliary *budan* 'to be' for utterances such as *omad-e bud* (came-PP aux) 's/he had come' represents past perfect tense in Persian (PP represents past participle which will be explained in the word level, in section 5.4.11 of this chapter). This tense is more complicated than other tenses in Persian acquisition and was rare in the children's samples at this stage. Wells (1985) also found that the order of emergence of auxiliaries is highly correlated (0.79-0.93) with syntactic-semantic complexity. In addition, the auxiliary *shodan* 'to become' as passive is rarely used in Persian. In the children's data, a few cases of the passive were found in the children's samples for the utterances such as, *bast-e shod* (close-PPmarker became) 'it was closed'.

We may summarize the phrase structures dominating Stage IV as follows:

#### Stage IV-PLARSP Phrase Level

N/AdjI VI	<i>pa:r-ash kard-am</i> (tear-it did-I) 'I tore it'	XcX	<i>dast o surat</i> (hand and face) 'hand and face'
PrDNAdj	<i>az un gerda:lu sefida</i> (of that round white) 'of that white round'	Aux/M	<i>mi-tun-e be-r-e madrese</i> (pres-be able-she sub-go-she school) 'she can go school'
cX	<i>dige man nusha:be</i> 'also I soft drink'	Aux/O	<i>omad-e bud</i> (came-PP aux) 'had come'

Other

## 5.4.8 Stage V

Major	Comm.	Statement		
Conn.	Clause		Phrase	
<i>dige</i>	Coord.	Coord. 1	1+	Postmod. 1 1+ Clause
<i>badan</i>		Subord. A+	1 1+	
c	Other	S	C O	Postmod. 1+
s				Phrase
other		Comparative		

Crystal, et al. (1989) labelled this stage as 'recursion' referring to the extension of sentence patterns by the repeated application of a single rule. This is the same in Persian. The first recursive process that emerges at clause level is the use of coordinating words, (c), such as, *dige* 'also' and *badan* /*badesh* 'then' in Persian corresponding the function of 'and' in English. That is, these two conjunctions are used frequently by Iranian children to link the elements of clause structures. Therefore, they are listed separately from the other coordinating conjunctions (e.g. *va*). This example was selected from Mahdi's data when he was 3;0. He described a story and his story followed the same pattern as that of *Little Red Riding Hood*.

*leba:se-esh pushid dar bast badan raft bar:-sh ma:shin be-xar-e*  
 (dress-her put on door closed then went for-her car subj-buy-she)  
 Clause            Ø Clause *badan*            Clause

'she put on her dress shut the door and went to buy a toy car for him'

Stage V commands do not differ markedly from the LARSP chart. The utterances, such as *bacha: beya:in man ta:b bedin* 'children come push me,' are grouped under coord. and more than 4 element imperative constructions are listed under 'Other.'

At Stage V Clause level coord. 1 two clauses are linked by *badan* / *badesh* or *dige*, Ø or conjunctions, (c), as seen below:

*ba:yad qaza:-sh-o bo-xor-e badesh be-r-e madrese*  
 Clause            badesh            Clause

(should food-his-Omarker subj-eat-he then subj-go-he school)

'He should eat his food then go to school.'

In Coord. 1+ more than two clauses are linked by *badan*, (c) or  $\emptyset$  e.g. (the example is given before)

*leba:sh-esh pushid dar bast badan raft bara:-sh ma:shin be-xar-e*

Clause  $\emptyset$  Clause *badan* Clause

(dress-her put on door closed then went for-him car subj-buy-she)

'she put on her dress shut the door and went to buy a toy car for him'

Subord. A1 covers a clause, containing an adverbial which is itself a clause e.g.

*mi-xa:st har moqe bozog shod*

V S A

\_\_\_\_\_

s C V

(past cont- wanted whenever big became)

'She wanted whenever she grew up'

or

*unja;ei ke raft-e bud-im mashid am omad-e bud*

A S V

\_\_\_\_\_

s AUX VI

(where that went-PP marker were-we Mashid too come-PP marker was)

'Where we had gone Mahshid had come, too.'

Subord A 1+ is a clause containing at least two adverbial clauses, e.g.

*ke kojolu bud-am das be sar-am mi-zad-am inja; dard gerft*

A A CompV

\_\_\_\_\_

s C VI A compVI

(that small child was-I hand at head-my past cont-put-I here hurt it)

'when I was a young child(when) I was touching my head it hurt here'

Subord. S is a clause containing a subject which is itself a clause. This structure was rare in the samples and the only example belongs to Faeze as shown below:

*tush hamuni did-i mi-xun-e*  
 S VI

---

A O VI  
 (inside that one saw-you Pres-sing-it)  
 'inside the one you saw sings'  
 that you saw inside= radio

Subord. C is a clause containing a complement element which is itself a clause, e.g. Faeze explains what chewing gum is like:

*adams-e sefid gerda:lu-e*  
 C (V) C

---

C (V)  
 (chewing gum-is white round-is)  
 'It is chewing gum which is round and white'

Subord. O is a clause which contains an object element which is itself a clause. The example below is selected from Mahdi's data.

Subord.O

*be-het goft-am ke tiger-e*  
 A VI O

---

s C(V)  
 (to-you said-I that tiger-is)  
 'I told you that it is a tiger'

Subord. O was the most common structure in the children's data at this stage.

In LARSP 'Comparative' refers to a clause containing a grammatical marker of comparison in English. This does not occur in Persian. The comparative *-tar*, is added as suffix to adjectives, nouns and adverbs, being used for the utterances such as:

*in bo zorg-tar-e*  
 (this big-er is)  
 'this is bigger'

Postmodifying clauses and phrases in PLARSP are mostly identical with those of LARSP. That is, a small range of clauses or phrases may be introduced as a part of a noun phrase structure, as one of the means of postmodifying the head noun. For example, Faeze produced a postmodifying clause when she was concluding her story as illustrated below:

post mod. clause

<i>a:dam ke</i>	<i>mi-r-e</i>	<i>ba:yad</i>	<i>bach-a-sh-o</i>	<i>negah</i>	<i>da:r-e</i>
S		O		CompVI	
<div style="display: flex; justify-content: space-around; width: 100%;"> <span>S</span> <span>s</span> <span>VI</span> </div>					

(person who pres-go-she should children-pl-her-Omarker care have-she)

'A person who goes away should take care of her children'

post mod. phrase1+ was rarely found in the children's data but was included to give a general picture of this stage. The only utterance was produced by Faeze when she was 2;8.

*az un-a: ke gerda:lu sefid-e*  
 (of that-pl that round white-def)  
 'those round and the white'

Stages VI and VII are not based on data from children acquiring Persian, as the children studied did not reach these levels. Therefore, they need research and further study.

## 5.4.9 Stage VI

(+) (+)			(-) (-)			
NP	VP	Clause	Conn.	Clause	Phrase	Word
Initiator	Complex+		<i>dige</i>	∅	D ∅	Poss/O
Coord			<i>badan</i>	Concord	Pr P	∅ <i>ezafe</i> V reg ∅
			c		Comp V	
			s			

Recall that this study is not aimed at describing the LARSP categories in detail. Instead, those who need more explanation of the LARSP chart are referred to Crystal, et al. (1989). Stage VI PLARSP corresponds to LARSP, focusing on what the child cannot do rather than what s/he can do. The child can use such a wide range of sentence structures and types that it is not economical to describe what s/he can do at this stage. The errors are listed on the Syntax Profile Chart as minus (-) features (see the LARSP chart, P.95). On the other hand, system completion is a label for some areas of syntactic development at this stage. These are listed on the Profile Chart as plus (+) features.

The Stage VI Profile Chart (+) mostly corresponds to the Persian profile while the Persian Profile Chart (-) is largely different from its English counterpart. Initiators in the LARSP Profile Chart (+) are those items preceding the determiner in a noun phrase, e.g.

'all the cows'.

I D N

In the PLARSP chart, this category may be used for utterances such as *hame-ye in bache-ha:* (all-*ezafe* this child-*pl*) 'all these children'. Utterances such as *sara/ doxtar-e behna:z xa:nom* 'Sara/Behna:z's daughter' as NP Coord refer to cases where two noun phrases are coordinated without any formal marker of the coordination present in this column. In the center of the + box in the LARSP chart (see LARSP chart P. 95), Complex+ refers to more

complex kinds of verb phrase such as 'he might not go'. In PLARSP, the Complex category may be used for utterances such as

<i>dust da:r-am harf be-zan-am</i>			
like	have-I	speech subj-	beat-I
CompVI		CompVI	
-----		-----	
Adj	VI	N	VI
'I like to talk'			

Passive structures rarely occur in Persian. Therefore they are omitted from the PLARSP chart. Complements are not used in the same form as in English so they are likewise omitted from the Profile Chart (+).

The Persian Profile Chart (-) is mostly different from LARSP. For example, in the LARSP chart, pronouns are a frequent area of error. This is not true in the case of Persian, since Persian pronouns have neither gender distinctions nor different grammatical forms. That is, the pronouns, namely *man*, *to*, *u*, *ma:*, *shoma:* and *una:*, are used as subject, object and possessive pronouns and in all cases the form of these pronouns is the same. In addition, generic and specific definite nouns are not marked in Persian and there are no irregular nouns. In this language, regular inflections are not overgeneralized to irregular forms, resulting in errors like 'foots', 'sheeps' at this stage. That is, these grammatical forms are not predicted to be areas of error in Persian as they are in English. On the other hand, compound verbs are a possible source of error at this stage. For example, the child may use a compound verb instead of a simple form of the verb e.g. *bastash bekon* instead of *bebandesh* (fasten-it do) instead of (fasten it) or vice versa. In the Word column, the possessive and object inflections as well as *ezafe* marker *e /ey* are sometimes likely to be omitted. Other categories of the LARSP Profile Chart (-), almost correspond to PLARSP. DØ stands for a determiner which has been omitted, e.g. *meda:d be-de* (pencil imp- give) 'give pencil' instead of *meda:d-am be-de* (meda:d-my imp- give) 'give my pencil'. P in the LARSP chart stands for a preposition being in the wrong place and Vreg represents the wrong form of a regular verb. These categories are also predicted to be areas of errors in Persian. There are two forms of verb root in Persian: present and past. The child may use the present root where he or she should

use the past root. For example, the verb *ka:shtan* 'to plant' has two verb roots, *ka:sht* 'planted' and *kar* 'plant'. The child may produce *ka:rid-am* 'I planted' instead of *ka:sht-am*.

#### 5.4.10 Stage VII

Apart from the expletives 'it' and 'there', which do not exist in Persian, other categories of the Stage VII LARSP chart are likely to be the same. At this stage, Discourse refers to the development of advanced strategies that a child uses to change the structure of his or her sentences. Connectivity refers to Adverbial Connectivity. That is, a child uses more advanced ways of joining sentences than those introduced at Stage V. Comment Clause refers to a parenthetical clause introduced into connected speech, e.g. *mi-dun-i* 'you know'. Emphatic Order refers to an alteration in the normal word order of a clause, for reasons of emphasis, e.g. *ali to be-ya; pish-e man* (Ali you imp - come to- *eza:fe marker* me) 'Ali/you come to me'. The category 'Other' is used for any further constructions which have no place elsewhere on the chart. Syntactic Comprehension refers to any cases where syntactic production seems to be in advance of comprehension. 'Style' on the PLARSP chart refers to alternative grammatical varieties, styles or any special forms that exist in the collected sample.

Stages VI and VII of Iranian children's language acquisition were confined to the above predictions since the children under investigation did not reach these levels and, in addition, these stages are not even complete in English.

## 5.4.11 Word level

Word
V/C + Person
Poss/O
<i>be-/bo-/</i>
<i>-biy</i>
<i>na-/ne-/</i>
pl
Obj /o
<i>mi-</i>
<i>ezafe/eley</i>
<i>def/ -e</i>
<i>indef/ -i</i>
'aux/PP
<i>-e</i>
<i>-tar</i>
<i>-tarin</i>

The inflections at word level on the LARSP chart are based on Brown's 14 grammatical morphemes. Some of these inflections are seen at Stage II, but Crystal et al. (1989) consider these to be used systematically from about Stage III. During Stages III and IV most of these inflections are introduced or established. These grammatical morphemes on the LARSP chart, which do not seem to have independent meaning on their own but, in Brown's phrase, 'modulate' the meaning, are as follows: the progressive inflection *-ing*, plural, past tense, past participle, 3rd person singular, possessive, contracted negative, contracted form of the copula, contracted form of auxiliaries, superlative forms, comparative forms and the adverbial suffix *'-ly'*. However, the order of these inflections in English is still tentative and needs more research. A similarly detailed word-order chart was used by Hickey (1987) for Irish. In addition, Ball (1988) devised separate charts (LLARSP-M and LLARSP-T) for recording developmental morphology and word-initial consonant mutations in Welsh. However, Hickey (1990) revised her chart and

presented a general word level. She found that the detailed word level analysis was not necessary up to age 3. Furthermore, she criticised Ball's chart and pointed out that his separate morphological charts had the disadvantage of fragmenting the profile.

In the case of Persian, the Word Level of the LARSP profile was preferred since the number of inflections in Persian was not so great as to necessitate the production of another chart for them. Furthermore, one of the aims of designing PLARSP has been to facilitate the work of assessment for Iranian speech and language therapists, not to make it more complicated.

The PLARSP word level begins with the present form of the verb *budan* 'to be' used by the children studied. As explained earlier, the notion 'to be' is expressed by suffixing the person agreement affixes to the complement. These affixes, which are regarded as copulas, are *-am*, *-i*, *-e*, *-im*, *-id* and *-and*; These are used as first, second and third person singulars and plurals, respectively. At the early stages of Iranian children's language development, most of the child's utterances have the C+ person agreement structure in which the third person singular agreement, *e*, is the most common form in Persian, e.g. *ha:pu-e* 'dog is'. In addition, V+person begins to appear for utterances such as *did-i* (saw-you) 'I saw' and *goft-am* (said-I) 'I said'. These inflections are shown as V/C + Person in the word column.

The six inflections, *-am*, *-et/t*, *-esh*, *-mun*, *-tun* and *-shun*, which are used for the first, second and third person singular and plural, respectively, are attached to nouns, and pronouns as possessive determiners. Similarly, these suffixes are attached to verbs or the subject suffixes of the verbs as the object inflections. The Poss/O on the chart reflects the above. The examples below illustrate this:

possessive inflections:

*ma:shin-am*

(car -my)

'my car'

or

*rang-esh*

(colour -its)

'its colour'

object inflections:

*xord -esh*

(ate -it)

'he ate it'.

*gerft-am-esh*

(caught-I - it)

'I caught it'

The prefix *be -/ bo -/biy-* has different functions in Persian. It is added to the present root in order to express either command or subjunctive forms of the verb. The verbs after the modal auxiliaries also have this kind of form. It is shown as *be -/ bo -/biy-* on the chart. The examples below illustrate functions of the *be-/bo-/biy-* prefix:

*be-de*

(*imp-* give)

'give'

*a;da;ms be-xor-am*

(chewing gum *sub-* eat-I)

'let me eat chewing gum'.

*ba;yad qaza:-sh-o be-xor-e*

(must food-her-Omarker subj- eat -she)

'she must eat her food'

The prefix *na-/ne-* is attached to the beginning of main verbs or modal auxiliaries to show negation in Persian, e.g.

*mi-xa:-m*

(*pres - want-I*)

'I want'

*be- kon*

*sub - do*

'do'

*ne-mi-xa:-m*

(*neg- pres - want-I*)

'I don't want'

*na-kon*

*neg - do*

'don't do'

Mahdi *be-nevis-e*

(Mahdi subj-write-he)

'let Mahdi write down'

Mahdi *na-nevis-e*

(Mahdi neg - write-he)

'let Mahdi not write down'

Since there is no distinction between countable and mass nouns in Persian, the suffix (*h*) *a:* marks plurality in both classes. This is shown as *pl* in the Word column.

The prefix *mi-* on the chart is added to the verb root to form the present, present continuous and future tense in Persian. The examples are selected from the children's data, e.g.

present continuous

*nega: tofang mi-gir-am unja:*

(look gun pres-point-I there)

'look I am pointing the gun there'

future

*ma:shin mi-gir-am*

(car pres-buy-I)

'I will buy a car'

present

*shax mi-zan-e*

horn pres-does it

'it horns'

According to Samiiian's (1983) study, *ezafe* which literally means 'addition', refers to the unstressed morpheme *e / ye* ; this appears between the head of a phrase and certain modifiers and complements following the head. The *ezafe* construction occurs in non-verbal phrase categories such as the noun phrase, the adjective phrase and the prepositional phrase. The examples below are selected from the children's data:

noun phrase:

*sar -e ba:ba:*

head -*eza:fe* daddy

'daddy's head'

adjective phrase:

*pesar - e xub*

boy-*ezafe* good

'good boy'

prepositional phrase:

*zir-e a:b*

under -*ezafe* water

'under the water'

This is shown as *ezafe e / ey* on the chart. As shown above, modifiers follow their head nouns. However, the order is opposite in the prepositional phrase.

The suffix, *-e* , is sometimes added to singular nouns to mark them as definite. The example below is from Mahdi's data:

*xa;nom-e am goft finished*  
 (lady-def too said finished)  
 'the lady also said finished'

On the chart, the *-i* stands for the indefinite suffix since most Persian nouns appear to be definite except when they are marked with the indefinite suffix *-i*. The example below is chosen from Faeze's data:

*yek-i elfente dust-am-e*  
 (one-indef Effente friend-my-is)  
 'one is Effente who is my friend'

The past participle inflection *-e*, which is also regarded as the present third person singular auxiliary, is also used in passive utterances such as, *bast-e shod* 'it was closed'. This is shown as 'aux /PP-*e*' on the chart.

The comparative suffix *-tar* was used for utterances such as *bozorg-tar* 'bigger' and *zeya:d-tar* 'more'. The superlative inflection *-tarin* did not appear in the children's data. However, in order to give a general picture of the children's development and since it is anticipated that this suffix will appear later in the children's language, it was included in the PLARSP chart.

## 5.5 Conclusion:

A first attempt was made to devise a profile for the acquisition of Persian based on longitudinal data from three monolingual children aged between 1;8 and 3;4. The resulting chart was able to represent satisfactorily the full range of grammatical structures produced by the children. The profile, which is based on normal language development, is the first step towards the development of an intra-language instrument and will be applied to compare the same child's language at different stages and different children at the same stage of language development according to MLU and age. Moreover, the profile constitutes the first procedure assessing language impairment in Persian. It represents a detailed general picture of normal language development from Stage I towards the end of Stage V. In addition, the profile was based on the hypothesis that the assignment of constructions are according to the number of elements. This hypothesis was confirmed. In the next chapter, this chart

will be used to profile the children's language acquisition according to MLU in the early stages and age in the later stages of their language development. It is hoped that the data collection on normal development can be extended so that the later stages of the chart can be fully tested and plotted.

# PLARSP

A Unanalysed				Problematic								
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes		
<b>B Responses</b>  Stimulus Type <input type="checkbox"/> Questions <input type="checkbox"/> Others			Totals	Normal Response					Abnormal		Problems	
				Major					Minor	Structural		0
				Elliptical			Reduced	Full				
C Spontaneous												
D Reaction				General		Structural		0		Other	Problems	
Stage I	Minor		Response			Vocative		Other		Problems		
	Major		Comm.	Quest.	Statement				Other		Problems	
		'V'	'Q'	'NegV'	'V'		'N'					
Stage II	Conn.	Clause				Phrase			Word			
	VX	QX	SV	OV	CompV	DN/Pro	NAdj	Pron	V/C + Person			
CompV	C(V)	SO	VI	VV	NN	IntX	Aux/I	Adj/NV				
		XA	XNeg	Other		Other		Obj/O/ro	Poss/O			
Stage III	X + S:NP		X + V:VP		X + C:NP		X + O:NP		X + A:AP			
	VXY	XVI	SVA	Other		Adj/NVI	mal		e-/bo-/ biy- na-/ne- pl			
CompVX	VIsIo	XC(V)			DNAdj	Cop						
		SOV	XCompV		PrDN/Pron		Other		Obj/o			
Stage IV	XY + S: NP		XY + V:VP		XY + C:NP		XY + O:NP		XY + A:AP			
	+ S	SOVI	Complex		Adj/NIVI		Aux/ M		mi- ezafel e/ey def/ -e indef/			
VXY+	AOVI	SVIsIo			PrDNAdj	O						
		XCompVI	Other		cX	Other		-i				
		SAVI			XcX			aux/PP				
Stage V	dige	Coord.	Coord.	1	1+	Postmod.	1	1+	-tar -tarin			
	badan	Other	Subord.A+	1	1+	clause	phrase					
		c	S	C	O	Comparative						
		s										
		Other										
Stage VI	(+)		(-)		NP		VP		Clause			
	Initiator	Complex+	Conn.	Clause	Phrase		Word		Poss/O ø ezafe v reg ø			
Coord	dige	badan	c	s	D ø	Pr	P	CompV				
		Concord										
		Other							Ambiguous			
Stage VII	Discourse				Syntactic Comprehension							
	A Connectivity Comment		Emphatic Order		Style							
		Other										
Total No. Sentences				Mean No. Sentences Per Turn				Mean Sentence Length				



## Chapter 6 - Language development in the children according to MLU

### 6.1 Introduction:

In chapter 4, MLU in morphemes was found to constitute a satisfactory means of evaluating Iranian children's language development. In this chapter, it will be used to order the samples of the children at the early stages of their language development. In the later stages, where MLU tends to lose its validity, the children will be studied according to their age to investigate whether the age would also manifest the steady progression of the children's language development. The children's language will be profiled on PLARSP charts to summarise their developments. This study originally aimed to investigate the language acquisition of the three children, but lacked the facilities, e.g. personnel and equipment, available to Brown's, Fletcher's and Wells' studies. Therefore, the children will be studied at particular points of their development and compared according to approximately equal MLU scores (this chapter) and age (chapter 7). In addition, Shahrzad's language development will be investigated at an earlier stage, MLU 1.24, than the other two children. Shahrzad joined the other two children when it was decided to give a more general picture of Iranian children's language acquisition. Her language development was studied when she was between 1;8 and 2;6. Some diary notes from her mother before 1;8 were also considered. The study on the language of the other two children began when Mahdi was 2;2 and Faeze 2;4. The selection of the above age ranges will enable us to take a first attempt towards the development of norms for the acquisition of Persian. Although the children present different strategies in their language development the order of emergence of structures, from one element to several, shows a similar steady progression down the chart according to MLU and age. The table below illustrates the selected samples of the children, at similar MLU/age points, which are included in this chapter and chapter 7.

Participants	Children's age	Children's MLU
Shahrzad	1;8	1.24
	1;11	1.98
Mahdi	2;2	2.18
	2;5	3.3
	2;8	4.45
	3;0	4.48
Faeze	2;4	3.33
	2;8	4.78
	3;0	5.22

As the above illustrates, the study of early stages is confined to Shahrzad's data only. This chapter describes Shahrzad's language development at MLU 1.24 and matches the children according to approximately equal MLU values as follows:

participant	age	MLU
Shahrzad	1;8	1;24
Shahrzad	1;11	1.98
Mahdi	2;2	2.18
Mahdi	2;5	3.3
Faeze	2;4	3.33

The relatively equal MLU values were not found in other samples of the children.

## 6.2 The criteria selected for the assignment of developmental stage for the children

As discussed earlier, the Stages of the PLARSP chart were not determined by age but by the number of elements per construction. However, in order to assign a stage for each child's profile in this chapter, it was decided to consider where the focus of the child's language is and where the representation of the categories is evenly distributed. In addition, the emergence of inflections as well as the frequency of the utterance will be taken into account (see Bloom, 1970 and Hickey, 1993) since in this chapter we will see that there are many cases in Iranian children's language where the tokens of restricted types of utterances, e.g. 'nouns', 'verbs', 'adjectives' and 'adverbs' are repeated in great number throughout the samples. Therefore, frequency alone is not a genuine device of stage placement since 'frequency does not always represent accurately the child's overall stage' (Hickey, 1987: 91). Moreover, formulaic expressions (non-productive utterances) in the children's samples will be identified on the basis of Hickey's criteria (1993:32) and will be considered in the child's stage placement.

Hickey (1993) suggested a range of criteria to determine whether an expression is formulaic. These are the length of the expression, its phonological coherence, lack of separately concurrent use of the individual elements, the level of grammatical complexity of the utterance, its frequency of usage in the community, the idiosyncrasy of the utterance, situational dependency and semantic or syntactic appropriateness. This study does not aim to explain Hickey's criteria for identification of formulas in detail. Instead, those interested in the detailed explanation are referred to Hickey's (1993) article.

As explained in Chapter 5, Crystal et al. (1989) assigned the Stages in the LARSP chart according to age. However, they warned that each stage is not an indicator of a process that switches off when the child moves to the next. For example, the child will continue producing one-word utterances even when s/he has moved to two-word utterances when s/he may produce some Stage III utterances as well. Therefore, Hickey (1987) divided each stage into Early Stage X, Stage X and Late Stage X. She defined Early Stage X as when a few patterns of the stage were present. Stage X, in her definition, is when

'many but not all of the stage's patterns are present, but this stage appears to be the focus of the child's language' (1987:91). Late Stage X is when all or most of the stage's patterns are represented with some progress into the next. This study mainly follows Hickey's criteria for stage placement. The PLARSP profiles and the investigation of the children's language development are based on 100 utterances which are contained for the most part within the 100 utterances used for the designing of the MLU measure (Chapter 4) and the PLARSP chart (Chapter 5). In the present chapter, Minor utterances will also be considered. This will allow us to present the general patterns of the children's acquisition of Persian.

### 6.3 Sharhrzad's profile and language development at MLU 1.24 (age: 1;8)

#### 6.3.1 Shahrzad's profile at MLU 1.24

Table 6.1 shows a summary of Sharzad's language development at MLU 1.24. As the table indicates, most utterances fall in Stage I. These utterances are restricted to 'imperatives', 'verbs', 'nouns', 'pronouns' and 'adverbs'. 'Pronouns' and 'adverbs' are grouped under the 'Other' category following Crystal, et al.'s (1989) analysis in LARSP. Some development has also occurred across Clause and Phrase, but only 16% of this sample is more advanced than Stage I. Although some of the Stage II categories are present, there is a great imbalance between the Clause and Phrase levels. In addition, under the Word column no inflections are present and the only suffix the child has produced is the plural which occurs twice throughout the sample for the utterance *in-a*: (this-pl) 'these' which seems to be rote learned. We can classify Shahrzad's language development as Late Stage I at MLU 1.24.

#### 6.3.2 Shahrzad's language development at MLU 1.24

Shahrzad's Stage I Minor utterances included (i) Responses, such as, *ha:n* 'yes' and *na* 'no' (ii) Vocatives, e.g. *ba:ba*: 'daddy', *ma:ma:n* 'mummy', *da:da*: 'brother' (iii) Other, such as, *byebye* 'byebye'. Persian 'yes' at this stage is normally applied by repeating the verb, but Shahrzad used the utterance *ha:n* as Persian 'yes' throughout the sample. 73% of Shahrzad's utterances fell

**Table 6.1 - Shahrzad's profile at MLU 1.24 (age 1;8)**

<b>A Unanalysed</b>				<b>Problematic</b>							
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes	
<b>B Responses</b>			<b>Normal Response</b>				<b>Abnormal</b>		<b>Problems</b>		
<b>Stimulus Type</b>			<b>Major</b>				<b>Structural</b>		<b>0</b>		
			<b>Elliptical</b>		<b>Reduced</b>						<b>Full</b>
<b>Totals</b>			<b>Minor</b>		<b>Other</b>		<b>Other</b>		<b>Problems</b>		
			Questions		Others						
<b>C Spontaneous</b>											
<b>D Reaction</b>			<b>General</b>		<b>Structural</b>		<b>0</b>		<b>Other</b>		
<b>Stage I</b>			<b>Minor Response 11</b>		<b>Vocative 12</b>		<b>Other 5</b>		<b>Problems</b>		
<b>Major</b>			<b>Comm. 'V' 6</b>		<b>Quest. 'Q'</b>		<b>Statement 'NegV' 'V' 1 'N' 24</b>		<b>Other 12</b>		
<b>Stage II</b>			<b>Conn.</b>		<b>Clause</b>				<b>Phrase</b>		
			VX 4		OV 2		CompV		DN/Pro NAdj Pron 10		
			QX		C(V) VI		VV		Aux/I		
			CompV		SO 2		SC 2		Adj/NV		
					XA 3		XNeg Other		Obj/O/to		
<b>Stage III</b>			X + S:NP		X + V:VP		X + C:NP		X + O:NP		X + A:AP
			VXY		XVI		SVA Other		Adj/NVI mal		
			CompVX		VIslo		XC(V)		DNAdj Cop		
					SOV		XCompV		PrDN/Pron Other		
<b>Stage IV</b>			XY + S: NP		XY + V:VP		XY + C:NP		XY + O:NP		XY + A:AP
			+ S		SOVI		Complex		Adj/NIVI		
			VXY+		AOVI		SVIslo		PrDNAdj		
			CompVXY		XCompVI		Other		cX XcX		
					SAVI				Aux/ M O		
<b>Stage V</b>			digē badan		Coord. 1 1+		Postmod. 1 1+		clause		
			c		Subord.A+ 1 1+		Postmod. 1+		phrase		
			s		S C O				Comparative		
			Other								
<b>Stage VI</b>											
			Initiator		digē		φ		D φ		
			Coord		badan		← →		Pr		
					c		← →		P		
					s		← →		Concord		
									CompV		
									Poss/O φ ezafe V reg φ		
			Other						Ambiguous		
<b>Stage VII</b>			Discourse		Emphatic Order		Syntactic Comprehension				
			A Connectivity Comment		Other		Style				
<b>Total No. Sentences</b>			<b>Mean No. Sentences Per Turn</b>				<b>Mean Sentence Length</b>				

in Stage I and the most common element that Shahrzad produced in this stage seemed to be nouns e.g. *maryam* 'Maryam (a girl's name)', *ma:shin* 'car', *masoud* 'Masoud (her brother's name)', *mahsa:* 'Mahsa (a girl's name).

Under Stage I Command, Shahrzad used the two-element imperatives in rote forms for utterances such as *be-ya:* 'come', *be-de* 'give' and *bo-ro* 'go'. As explained before, Persian has two separate verb roots: present and past. A prefix is always used in the construction of simple present roots in Persian. On the other hand, in Persian the past root does not require any prefixes and the third person singular form in the past with zero inflection is similar to the past root. That is, the past root resembles the third person singular past form. For example, under Statement, the utterance *goft* 'said' that Shahrzad produced can be interpreted as either past root or third person singular past form 's/he said'. In this stage, Shahrzad used the present verb root for constructing imperatives and the past root for 'V' under Statement. The utterances, such as *man* 'I' and *in* 'this' were grouped under 'Other.'

The individual Clause elements had no expansion in Stage II and, apart from the repetition of the pronoun *man* 'I' under Phrase and the plural suffix *-a:* under Word, no other categories were seen in these levels (see Table 6.1).

Under Clause, Shahrzad produced only the following instances:

VX	<i>be-de man</i> (repeated 3 times) (imp-give me) 'give me'	<i>in be-de</i> (this imp-give) 'give this'	
SV	<i>ma:shin zad</i> 'car hit'	<i>in zad</i> 'this hit'	
SO	<i>man in - a:</i> (I this-pl) 'I these'	<i>man in</i> 'I this'	
AX	<i>ba:ba: ba:la:</i> 'daddy up'	<i>ba:ba; ba</i> 'daddy enough'	<i>man ba:la:</i> 'I up'

SC	<i>in bebe</i>	<i>in-a: ma:shin</i>
	'this Bebe'	(this-pl car)
		'these car'

Goodluck (1986, 1991) believes that the constructions below, so-called pivot-open utterances (see Braine, 1963), from Shahrzad's data represent the fact that 'at a very early age children's utterances are governed by a system that goes beyond simple concatenation of words' (1991:78). Lust (1983, 1986) also claims the branching direction of language on the ground of 'switch setting'. This hypothesis, in fact, follows Chomsky's (1986) argument that children might know in advance that language is rule-governed and has a hierarchical structure. This subject will be discussed further in chapter 8.

<i>man be-de</i>	<i>ba:ba: ba:la:</i>	<i>in zad</i>
(me imp-give )	'daddy up'	'this hit'
'give me'		

<i>man ina;</i>	<i>man: ba:la:</i>	<i>ma:shin zad</i>
(I this-pl)	'me up'	'car hit'
'I these'		

*man in*  
'I this'

*man ba:la:*  
'I up'

## 6.4 Shahrzad's profile and language development at MLU 1.98

### 6.4.1 Shahrzad's profile at MLU 1.98

As is seen in Table 6.2, 65% of Shahrzad's utterances at MLU 1.98 are placed in Stage I. However, a close examination of this restricted stage reveals that the focus of development has shifted from Stage I to Stage II. The two-element Imperative and Statement utterances are now established and progress has been made towards three-element utterances. The production of some Stage IV categories (see Table 6.2) is not compatible with MLU 1.98. As their inclusion seems surprising in this stage, these patterns were explored



closely. In fact, it was found that the SAVI and SAVIA (under Other) categories were possible formulas. It was discovered that these categories were partly composed of the same utterance on each occasion. The utterances were as follows:

*man am be-xor-am*

S A VI

(I too pre-eat-I)

'I eat, too'

*man am raft-am madrese*

S A VI A

(I too went-I school)

'I went school, too'

*man am raft-am*

S A VI

(I too went-I)

'I went,too'

*man am ne-mi-ya:-m*

S A V I

(I too neg-pres-come-I)

As is seen above, the *man am* 'I too' utterance is the same in all of the above utterances. This finding is comparable to Hickey's (1987) investigation of one of her subjects in Irish and compatible with Hickey's (1993) criteria for identification of formulas. The above utterances manifest Hickey's argument that 'utterances which the child first uses whole and then breaks down into their components, perhaps going through an intermediate stage when only part of the unit has been analysed' (1993: 29). It is worth noting that Shahrzad was the most imitative of the children and this suggests that her sentences, particularly in Stage III, may have been imitated routines and not syntactically productive. The role of formulas in language acquisition has also been argued by many other researchers. For example, while Bates, Bretherton and Snyder (1988) argue that formulaic style is a different route into language, Pine and Lieven (1990) suggest that 'expressiveness', characterised by the use of formulas, is a less advanced strategy than 'referentiality'. Lieven Pine and Dresner Barnes (1992) note that such phrases which are initially unanalysed may actually provide an alternative route into multiword speech.

The other major advance in this session is the appearance of various inflections. As is seen in Table 6.2, V/C + Person and *be-/bo-/biy-* are the most common inflections in the Word column. The stage placement for Shahrzad seems to be Stage II at MLU 1.98.

#### 6.4.2 Shahrzad's language development at MLU 1.98

##### 6.4.2.1 Shahrzad's Command-type utterances

The most frequently-used clause type in Shahrzad's sample was imperatives for the following utterances:

VimpX	(1)	<i>be-shur-esh</i> V O (imp-wash-it) 'wash it'	(2)	<i>be-de-in</i> V S (imp-give-you + pl) 'give'
	(3)	<i>be-de be man</i> V A —— pr Pron (imp-give to me) 'give to me'	(4)	<i>be-de man</i> V O (imp-give me) 'give me' (repeated 3 times)
	(5)	<i>in-o be-bin</i> O V —— Pr Omarker (this-Omarker imp-see) 'see this'	(6)	<i>porteqa:l be-de</i> O V (orange imp-give) 'give orange'
	(7)	<i>man be-de</i> O V (me imp-give) 'give me'		

Of 11 VX productions 7 were produced with the verb *be-de* (imp-give) 'give'. The adverbial expansion in (3) as well as the object expansion in (5) were

observed. The *be-de man* (4) utterance was repeated three times throughout the sample. The prefix *be-/bo-/biy-* began to appear in great number. It emerged as 13 tokens of 27 utterances types. The analysis of *be-de be man* (3) was taken as VA because the object appeared with the preposition *be* 'to'. Similar structures, see (4) and (7), without a preposition were taken as VO. Fletcher (1985) analysed utterances like 'Mary came me' as SVO. He himself points out:

'The form is SVO - the absence of a preposition in this and other cases means that what should be SVA is assimilated to the dominant SVO pattern in the data'. (1985: 75)

When these kinds of structures appeared without a preposition in the children's data they were regarded as an object.

The three VXY command structures in Stage III appeared with the verb *da:d-an* 'to give' as illustrated below:

(1) <i>kart be-d-in</i>	(2) <i>be-d-in man</i>	(3) <i>man be-d-esh</i>
X V Y	V X Y	X V Y
(knife imp-give-you+pl)	(imp-give-you+pl) me	(me imp-give-it)
'give knife'	'give me'	'give it to me'

It seems that most utterances in this stage are formulas since they satisfy at least the necessary conditions for formula identification. That is, the utterance is at least two morphemes long and coheres phonetically (see Hickey, 1993: 32). In addition, they are used unchanged and frequently (see Peters, 1983 and Wong Fillmore, 1976).

#### 6.4.2.2 Shahrzad's Statement type utterances:

The other most common Clause type in Stage II was VI (see Table 6.2) for the following utterances:

(1) <i>na-dar-i</i>	(2) <i>raft-am</i>	(3) <i>did-i</i>
(neg-have-you)	(went-I)	(saw-you+ sg)
'you don't have'	'I went'	'You saw'

- |   |  |
|---|--|
| (4) <i>bo-xor-am</i><br>(subj-eat-I)<br>'I eat' = 'I want to eat' | (5) <i>bo-xor-im</i><br>(subj-eat-we)<br>'we eat' = 'we want to eat' |
|---|--|

The above structures were five tokens of nine utterance types. The utterance, *bo-xor-am* (4) was repeated four times throughout the sample.

Three other structures were placed under this heading: SV, *masoud keshid-e* (Masoud-drew-Aux) 'Masoud has drawn', which was repeated twice throughout the sample, C(V), *man-e* (mine-is) 'it is mine' and AX, *man am* 'I, too'. The emergence of Subject and the Auxiliary *-e* (present perfect, third person singular in the form of inflection) were seen in this level.

Expansions may happen in the form of inflections in Persian. In this sample, the verb and object elements were expanded by inflections as seen below:

X + V: VP = 2	<i>masoud keshid-e</i> X      V  <hr style="width: 50px; margin: auto;"/> V      Aux (Masoud drew-Aux) (Masoud has drawn)
---------------	--

X + O: NP=1	<i>man-o be-bin</i> O      X  <hr style="width: 50px; margin: auto;"/> Pron- Omarker (me-Omarker imp-see) 'see me'
-------------	---

There was one case of adverbial expansion as illustrated below:

X+A: AP = 1	<i>be-de be man</i>
	X      A
	—
	Pr Pron
	(imp-give to me)
	'give to me'

The variety in phrase structures was limited to ND for two utterances *xod-et* (self-your) 'yourself' and *yek-i* (one-indef) 'one', the pronoun *man* 'I, me, mine', which appeared 11 times throughout the sample, and the Aux/I category for the utterance *masoud keshid-e* (Masoud drew-Aux) 'Masoud has drawn'. As is seen above, it seems that in Persian as in English the object noun phrase would be elaborated before the subject noun phrase (Garman, 1986; Limber, 1976).

Since subject, object and possessive pronouns are the same in Persian, Shahrzad used *man*, as subject in utterances such as, *man raft-am* (I went-I) 'I went', as object in utterances such as, *be-de man* (imp-give me) 'give me' and as possessive pronoun in utterances such as *man -e* (mine-is) 'it is mine'. The other pronouns, except in the case of the reflexive pronoun *xod-et* (self-your) 'yourself', were absent at this stage of Shahrzad's language development.

The other clause type allowed for on the chart was Statement in Stage III. Three structures were placed in the clause level under this heading: SVI for utterances such as *xod-et na-dar-i* (self-your neg-have-you) 'yourself don't have' [Shahrzad used a reflexive pronoun as subject], *man raft-am* (I went-I) 'I went', *ne-mi-ya-m man* (neg-pres-come-I) 'I am not coming' and *mi-shin-am man* (pres-sit-I I) 'I am sitting', XVI for utterances such as

(1) *pa:ein na-za:r-am*

A      VI

down neg-put-I

'I don't put down' refers to when Shahrzad wanted to put her bottle up out of reach

(2) *in-o mi-x-am*  
           O      VI

---

Pron-Omarker  
 (this-Omarker pres-want-I)  
 'I want this'

and SAA (under Other) for the following utterance:

(3) *shahrzad madrese badan*  
           S          A   A  
 'Shahrzad school later'

The above utterance (3) was produced when Shahrzad asked her mother to tell her friend, Fatemeh, to visit her later because she was at school.

As is seen above (2), one case of object expansion was seen in Stage III-IV.

#### 6.4.2.3 Word level

Of 22 V/C + Person inflections in this sample, two were *-i* (2nd person singular subject inflection), ten were *-am* (1st person subject), five were *-in* (2nd person plural subject), three were *-esh* (3rd person singular-object or possessive) and one was *-et* (2nd person singular). The plural *-a:* was repeated three times for the same utterance. The prefix *be-/bo-/biy-* was produced twenty-seven times throughout the sample. This prefix was used at the beginning of imperatives and subjunctive verbs. The negative marker *na-/ne-* was used four times throughout this session. The object marker *-o* was used three times and finally the present prefix *mi-* was produced twice in the sample.

#### 6.4.2.4 A note on Shahrzad's verbs

As explained in Chapter 5, there are two kinds of prefixes for the present tense in Persian: the prefix *be-/bo-/biy-*, which is used in forming imperatives and subjunctives, and the prefix *mi-* for the other present tense forms.

Shahrzad began to use the prefix *be-/bio-/biy-* for imperatives at MLU 1.24. There was only one case of past tense third person singular with zero inflection in this stage. Her Stage II verbs at MLU 1.98 appeared either in the past form without a prefix or with the prefix *be-/bo-/biy-* to express subjunctive and imperative forms. The prefix *mi-*, which is used to indicate present, present continuous and future tense in Persian, was produced only twice at MLU 1.98 for the following utterances:

(1) *in-o mi- xa-m*  
 (this-Omarker pres-want-I)  
 'I want this'

(2) *ne-mi-ya-m man*  
 (neg-pres-come-I I)  
 'I am not coming'

Shahrzad produced utterance No.(2) when her father was going out and Shahrzad did not want to go with him.

## 6.5 Mahdi's profile and language development at MLU 2.18 (age 2;2)

### 6.5.1 Mahdi's profile at MLU 2.18

As is seen in Table 6.3, Mahdi's Stage I utterances cover 64% of the sample. This stage usually covers a high percentage in the samples. The profiles of Hickey's (1987) children also indicated a high rate of Stage I utterances. However, the profile (Table 6.3) is of a child whose language development is impartially scattered throughout Stage II and some progress has been made towards Stage III. The clause and phrase elements are evenly distributed in Stage II. At Word level, some of the categories such as V/C + Person and the negative prefix are seen in abundance. Mahdi's profile is probably Late Stage II at MLU 2.18.

## 6.5.2 Mahdi's language development at MLU (2.18)

### 6.5.2.1 Stage I:

The dominant element in Stage I was nouns. There were only two imperative verbs produced twice for the utterances, *be-de* (imp-give) 'give' and *be-ya:* (imp-come) 'come' in this stage. The question utterance *chi* 'what' was placed under 'Q'. The 'NegV' *nist* (neg-is) 'it isn't' was produced four times throughout the sample on different occasions. Under the 'Other' category, 'pronouns', 'adjectives' and 'adverbs' were included. The production of the 'adverb' *hamintor* 'so' was noticeable.

### 6.5.2.2 Stage II:

One case of imperative production for the utterance *qese be-gu XV* (story imp-tell) 'tell story' was seen in Stage II. XQ was used for the utterance *xa:le ku* (aunt where) 'where is aunt'. This utterance was repeated twice in the sample.

Under Statement, the most common clause type in Mahdi's sample was C(V) for the following utterances:

- |  |  |  |
|--|--|--|
| (1) <i>sard-e</i><br>(cold-is)<br>'it is cold'<br>(repeated 4 times) | (2) <i>ota:q man-e</i><br>(room my-is)<br>C (V)<br>_____<br>N D<br>'it is my room' | (3) <i>ma:ma:ni-ye</i><br>(mum- is)<br>'it is mum's'   |
| (4) <i>pa:in-e</i><br>(down-is)<br>'it is down'                      | (5) <i>in-e</i><br>(this-is)<br>'it is this'                                       | (6) <i>sa:at ma:ma:ni-ye</i><br>(watch mum-is)<br>C V<br>_____<br>N N<br>'it is mum's watch' |



As illustrated above, the complement expansions are seen in (2) and (6). The above utterances were 6 tokens of 11 utterance types. Mahdi's other categories in Stage II were as follows:

SV (1) *in zad* (repeated twice in the sample)  
'this hit'

(2) *in ma:ma:n kard-e*  
(this mum did-Aux)

S V

————— —————  
D N V Aux

'this mum has done'

(3) *ma:ma:n kard*  
'mum did'

SO (1) *da:da:shi man*  
'brother me'

XA (1) *hapu xune* (2) *ba:ba: xune*  
'dog home' 'daddy home'

VI (1) *did-i*  
(saw-you)  
'did you see'

SC (1) *in xodka:r man*  
'this pen mine'

S C

—————  
D N

XNeg (1) *in na* (repeated four times)  
'this no'

CompV (1) *la:la: kard-e* (repeated twice)  
 (sleep did-Aux)  
 X V  
 —  
 V Aux  
 'has slept'

As is seen above, under SV the utterance in *ma:ma:n kard-e* (2) has both S expansion [*in ma:ma:n*] *kard-e* and V expansion in *ma:ma:n [kard-e]* (this mum did-Aux) 'this mum has done'. In addition, another V expansion is seen in *la:la: [kard-e]* (sleep-did-Aux) 's/he has slept' under CompV (1).

At Stage II phrase level, apart from some categories which were the expansions of two-element clause elements, DN was produced for the utterances such as *ota:q in* (room this) 'this room', *ota:q man* (room my) 'my room', *in xodka:r* 'this pen' *in ma:ma:n* 'this mum' and *in didi* 'this car' and NN was used for the utterances such as *sa:at ma:ma:n* and *ma:ma:n sa:at* 'mum's watch'. The latter was produced with a wrong word order. PrN was used for the utterance *to xune* 'in house'.

### 6.5.2.3 Stage III

Most of Mahdi's language progress in this stage occurred under Statement. SC(V) was the most common category in Mahdi's sample. The following utterances illustrate this category:

SC(V)	(1) <i>pa:ein sard-e</i> (down cold-is) 'down is cold'	(2) <i>in ax-e</i> (repeated 7 times) (this dirty-is) 'this is dirty'
	(3) <i>in dar-e</i> (this door-is) 'this is door'	(4) <i>in in-e</i> (this this-is) 'this is this'

(5) <i>in sa:at ax-e</i> (this watch dirty-is) S      C(V)	(6) <i>in ki-ye</i> (this who-is) 'who is this'
<hr style="width: 20%; margin: 0 auto;"/> D    N	

(7) <i>zabt ax-e</i> (recorder dirty-is) 'recorder is dirty'	(8) <i>ax-e sa:at</i> (dirty-is watch) 'watch is dirty'
--	---

The only expansion in the above examples appears to be of subject elements (XY + S: NP) for the utterance [*in sa:at*] *ax-e* (this watch dirty-is) 'this watch is dirty'. As is seen above, Mahdi's only (V) production was *-e*, and utterance *ax-e* (dirty-is) 'is dirty' was produced 10 times on different occasions through the sample.

Under the XVI category, SVI was produced for the utterances *in be-sh-e* (this pres-become-it) 'it becomes', *da:da:shi be-sh-e* (brother pres-become-it) 'brother becomes' and OVI was used for the utterance *did-i in* (saw-you this) 'did you see this'. AVI was used for the utterance *aslan be-sh-e* (just sub-become-it) 'it just becomes'. CompVI was produced for the utterance *zabt ne-mi-sh-e* (record neg-pres-become-it) 'it is not being recorded'.

The SVI and AVI categories in Mahdi's data appeared to be formulas since all of the utterances were produced with the verb *be-sh-e* (sub-become-it) 'it becomes'. It seemed that Mahdi produced this verb when he got angry and *be-sh-e* 'it becomes' seemed to be intended as a swear word.

As the examples ( see under SC(V), SVI above and SCompV below) show , the most frequent realisation of subject is nominals although Mahdi also produced occasional pronouns, particularly the pronoun *in* 'this'.

The CompVI category was used for the utterance *zabt ne-mi-sh-e* (record neg-pres-become-it) 'it is not being recorded' and XCompV was produced for the following utterances:

(1) *da:da: la:la: kard-e* (repeated twice)

S      CompV

---

N      V Aux

(brother asleep did-aux)

'brother has slept'

(2) *ma:ma:n xara:b kard*

S      CompV

---

Adj    V

(mummy ruin did)

'mummy broke down'

(3) *da:da; xara:b kard*

S      CompV

---

Adj    V

(brother ruin did)

'brother broke down'

(4) *ba:ba: dast kard*

S      CompV

---

N      V

(daddy hand did)

'daddy touched'

(5) *in xara:b kard*

S      CompV

---

Adj    V

(this ruin did)

'this broke down'

As is seen above, the only expansion is of S elements which is placed under transitional Stage II-III. Under the 'Other' category XYNeg was produced for the utterance *xune did na* (home car no) 'no driving at home'

Apart from the emergence of *mal* (genitive marker), no other constructions in Stage III phrase level were seen.

#### 6.5.2.4 Word level

Most of Mahdi's inflectional productions at MLU 2.18 were the inflection *-e* (third person singular) under V/C + Person. One case each of suffix *-i* (2nd person singular), *na- /ne-* (negative marker) and *mi-* (present tense marker) was seen. The prefix *be-/bo-/biy-* was produced nine times for the imperatives and subjunctives throughout the sample.

### 6.6 The composite chart for the children at MLU 2

Table 6.4 shows the composite chart for Sharzad's and Mahdi's language development at MLU 2. The common element in Stage I was nouns. Both Shahrzad's and Mahdi's profiles illustrate that most of the two element patterns in Clause and Phrase levels are represented and some progress has been made into Stage III. However, as we saw above, most of the Stage III categories appeared to be formulas. The subject, verb, object and adverbial elements are expanded and scattered evenly in the transitional Stage II - III. Some of the inflections (e.g. V/C + Person and *be-/bo-/biy*) are seen in abundance in the profile. The composite chart for Shahrzad and Mahdi (table 6.4 on page ) indicates that their overall stage placement is probably Late Stage II.

### 6.7 Discussion and Conclusion

As discussed above, Persian possesses two verb roots: present and past. The present root always appears with a prefix. On the other hand, the past root resembles the third person singular past tense and does not require any prefixes or inflections.



As we saw, Shahrzad's strategy was different from Mahdi's. Most of Shahrzad's utterances were in the form of imperatives using the present root with the prefix *be-/bo-/biy-*. She followed this strategy in Stage II and most of her verbs in the Command and Statement columns were constructed with the *be-/bo-/biy-* prefix.

In contrast, most of Mahdi's verbs were constructed with the past root. In addition, he used the C(V) structure in abundance for present tense. Following this strategy, he used the C(V) structure with a subject in Stage III.

Moreover, Bates, Bretherton and Snyder (1988) and Bates et al. (1995) represent a summary of the claims in the literature about individual differences in early language development. Two styles of acquiring language by children, referentiality and expressiveness, have been reviewed by the above researchers as well as by Bates, Camaioni and Volterra (1975). Since the main focus of this study has been grammar, it is perhaps suitable to make some observations about the apparent differences between Shahrzad's style of learning grammar and Mahdi's. Before comparing the children it is useful to refer to the table below from Bates et al. (1995) which gives a summary of individual differences in the grammatical development of children:

Strand 1	Strand 2
<b>Grammar</b>	
Telegraphic in Stage I	Inflections and function words in Stage I
Refers to self and others by name in Stage I	Refers to self and others by pronoun in Stage I
Noun phrase expansion	Verb phrase expansion
Morphological overgeneralization	Morphological under-generalisation
Consistent application of rules	Inconsistent application of rules
Novel combinations	

Imitation is behind spontaneous  
speech  
Fast learner

Imitation is ahead of  
spontaneous speech  
Frozen forms  
Slow learner

If we compare Shahrzad's profile at MLU 1.98 at age 1;11 (Table 6.2) and Mahdi's profile at MLU 2.18 at age 2;2 (Table 6.3), the only two profiles at two word combinations, we observe several interesting differences. Shahrzad's profile is mostly in accordance with the Strand 2 description while Mahdi's style of grammar development is mostly in agreement with Strand 1. In other words, Shahrzad's style can be classified as 'holistic' or 'rote' while Mahdi's as 'analytic'. Mahdi, with a referential vocabulary, displayed a nominal style in his first word combinations while Shahrzad with an expressive vocabulary in one word stage showed a more formulaic and pronominal style in her first word combinations (see Nelson, 1973, 1981 and also Bloom, Lightbown and Hood's, 1975 distinction between nominal and pronominal basis of early syntax). As table 6.2 shows Shahrzad used 12 Nouns and 15 Pronouns at her early two word combination while Mahdi used 26 Nouns and 5 Pronouns in this stage (Table 6.3). As we saw, Mahdi mostly referred to himself and others by name while this was not seen in Shahrzad's data. Noun phrase expansions were seen three times more frequently in Mahdi's PLARSP profile, table (6.3), than in Shahrzad's while VI was produced more extensively by Shahrzad than Mahdi. Gleitman and Wanner (1982) proposed that learners differed significantly in their emphasis on the open-class lexicon (nouns, verbs, adjectives) and closed-class lexicon (function words). Shahrzad used a higher proportion of function words (Table 6.2 word column) than Mahdi, while Mahdi used a significant number of nouns and adjectives. Most of Shahrzad's utterances were frozen forms according to Hickey's (1993) guidelines, particularly those which were produced at Stage IV of the chart (Table 6.2), while these rarely occurred in Mahdi's data. She was also the most imitative of the children. However, morphological undergeneralization and overgeneralization were not investigated in the children's data; yet, Mahdi seemed to be faster than Shahrzad in learning language, since Table 6.3 shows that he has made more progress into stage III than Shahrzad. On a broader level, other factors possibly relating to stylistic differences such as the nature of maternal input, etc. should also be considered. Certainly, this needs more investigation and will be pursued after computerising the data fully.

However, although these children followed different routes in their language development, their progress was similar in the number of units per construction and both children appeared to be at Late Stage II at approximately MLU 2. In addition, most of the Stage I and II categories were used by both children. For example, in Stage II Clause level, the VimpX, SV, XA and VI categories were common to both children and at Phrase level the shared categories were DN, Pron and AUX/I. Moreover, in the transitional Stage II-III, the expansion of verbs in the form of inflection was used by both Shahrzad and Mahdi. Many of the Stage III categories appeared to be formulas in the children utterances. However, XVI categories were common to both children in this stage. As illustrated then, the profiles show the two children's language development at an approximate level of MLUm 2. Age differences between the children were not wide as Shahrzad was at age 1;11 and Mahdi at 2;2. Crystal, et al. (1989) allow for a  $\pm 6$  months age range rate of acquisition for each stage because of individual differences. However, as is seen in Table 6.2 and 6.3, Mahdi used more of the stage III categories, such as CompVI, XCompV and XC(V), than Shahrzad. As explained before, this shows that Mahdi's language development was more advanced than Shahrzad's. But this is not surprising since Mahdi's MLU value is slightly higher (MLU= 2.18) than Shahrzad's (MLU= 1.98).

## 6.8 Mahdi's profile and language development at MLU3.3 (age 2;5)

### 6.8.1 Mahdi's profile at MLU 3.3

As is shown in table 6.5, Mahdi's Stage I utterances still constitute a high percentage of the sample. However, in contrast to Mahdi's profile at MLU2.18, the focus of the child's language has shifted from Stage II to Stage III. The clause and phrase elements are more evenly distributed in Stage III and some progress has been made to Stage IV. This progress is more observable in the word column and most common inflections are either emerging or seen in abundance. Mahdi's profile can be classified as Late Stage III at MLU 3.3.

### 6.8.2 Mahdi's language development at MLU 3.3 (age 2;5)

The most common clause type is XVI for the utterances such as *in mi-shkan-e* (this pres-break-it) 'this breaks', *adams be-xor-im* (chewing gum subj-eat-we) 'let's eat chewing gum' or 'we eat chewing gum' and *ye dune dast dar-e* (one number hand have-he) 'he has one hand' (the latter utterance was produced when Mahdi's Dad drew a picture of Mahdi with only one hand) followed by SC(V) under XC(V) for the utterances such as *un bad-e* (that bad-is) 'that is bad', *to bad-i* (you bad-are) 'you are bad', *in ada:ms-e* (this chewing gum-is) 'this is chewing gum'.

The 'Other' structure in Stage III in this sample is CompV/CV?I for the utterance *balad ni-st-i* (knowledgeable neg-be-you) 'you don't know' which was repeated twice throughout the sample.

There is a complication here which needs further discussion. The utterance *balad ni-st-i* (knowledgeable neg-is-you) 'you don't know' can be regarded as CompVI or CVI. As explained before, in Persian, compound verbs are usually formed by the combination of adjectives or nouns with simple verbs. The problem here is that the verb *budan* 'to be' follows the adjective *balad* (knowledgeable) and can be regarded as CompVI or CVI. In order to avoid ambiguities, such constructions are entered under the 'Other' category.

# Table 6.5 - Mahdi's profile at MLU 3.3 (age 2;5)

<b>A Unanalysed</b>				<b>Problematic</b>								
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes		
<b>B Responses</b>												
Stimulus Type  Questions  Others				Normal Response				Abnormal				
				Major								Problems
				Elliptical		Reduced	Full	Minor	Structural	0		
Totals												
<b>C Spontaneous</b>												
<b>D Reaction</b>				General		Structural		0		Other	Problems	
<b>Minor</b>				Response 10		Vocative 4		Other 13		Problems		
<b>Major</b>				Comm. 'V' 14		Quest. 'Q'		Statement 'NegV' 'V' 1 'N' 7		Other 8	Problems	
<b>Conn.</b>				Clause				Phrase		Word		
<b>Stage II</b>				VX 2	Q	SV 2	OV	CompV 1	DN/Pro 5	NAdj	Pron 2	V/C + Person 52
<b>Stage III</b>				CompV	C(V) 7	SO	SC 1	VV	NN 1	IntX	Aux/I	Adj/NV 2
<b>Stage IV</b>				X + S:NP	X + V:VP	X + C:NP	X + O:NP 2	X + A:AP	Adj/NVI 5	mal 3	Cop 7	Obj-o mi-16
<b>Stage V</b>				VXY 1	CompVX	XVI 14	SVA	Other 2	PrDN/Pron	DNAdj 1	Other 3	biy-9
<b>Stage VI</b>				+ S 1	VXY+	CompVXY	SOVI	AOVI	XCompVI 4	SAVI	Complex 4	SVIslo
<b>Stage VII</b>				Other	Coord. 1	1+	Subord.A+ 1	1+	S C O	Comparative	Postmod. 1	1+
<b>Stage VIII</b>				NP	VP	Clause	Conn.	Clause	Phrase		Word	
<b>Stage IX</b>				Initiator	Complex+	Coord	dige	ø	D ø	Pr	P	CompV
<b>Stage X</b>				Other	Discourse	A Connectivity	Emphatic Order	Comment	Other	Syntactic Comprehension		Style
<b>Stage XI</b>				Total No. Sentences	Mean No. Sentences Per Turn				Mean Sentence Length			

Table 6.5 shows that the expansions of this sample appear to be of the object element in two-element clauses (X + O: NP=2), for example, *pa:-m be-gir* (foot-my imp-hold) 'hold my foot' which was repeated twice in the sample. In three-element clause utterances the expansions are of subject, complement and object elements as illustrated below:

(XY + S: NP=1)

for example, *xod-et xara:b kard-i*  
                   S          X   Y

—  
 N D

(self-your ruin did you)  
 'yourself broke',

(XY+C: NP=2)

for example, *a:da:ms mal e to-e*  
                   X          C   Y

—  
*ma:l* Pron

(chewing gum *ma:l ezafe* you-is)  
 'is chewing gum yours'?

and *ye dune dast dar-e*  
       C          X   Y

—  
 D Adj N

(one number hand have-he)  
 'he has one hand'

XY + O: NP= 1

*ambulance ma:shin be-kesh-am*

O X Y

---

N N

(ambulance car subj-draw-I)

'I (want to) draw ambulance (and) car'

There were longer noun phrase structures in Stage III like NVI=5, *xara:b kard-i* (ruin did-you) 'you broke', which was repeated five times throughout the sample and appeared to be a formula, and DAdjN=1, *ye dune dast* (one number hand) 'one hand'. The most frequent realization of subject was either personal pronouns or null subjects and occasionally self reference and proper nouns. The extensive use of pronouns and inflections is notable in this sample. Mahdi produced the pronouns *man* 'I', *to* 'you', *ou* 'he/she' and *in* 'this', but there were no cases of plural pronouns.

The most common inflections were V/C Person followed by the present tense inflections *mi-* and *be-/bo-/biy-*. The other inflections were the negative inflection *na-/ne-* plural inflection *-ha:*, *eza:fe e/ey* and possessive inflection *-et*.

In Stage IV, as is seen in table 6.5, the XCompVI category was produced 4 times. However, a close examination revealed that the CompVI part of 4 XCompVI constructions was a token of the following types of utterances: *xod-et xara:b kard-i* (self-your ruin did-you) 'yourself broke down', *hame xara:b kard-i* (all ruin did-you) 'you broke all', *mahdi xara: b kard-i* (Mahdi ruin did-you) 'you broke Mahdi's' and *to xara:b kard-i* (you ruin did-you) 'you broke down' which can be considered, according to Hickey's criteria (1993), as a possible formula. Similarly, under the 'Other' category, XCompV/CV?I, the SCompV/CV?I category and, SCompV/CV?IVI seem to be possible formulas. The utterances are as follows:

SCompV/CV?I= 3

*to balad ni-st-i* (repeated twice)  
 (you knowledgeable neg-are-you)  
 'you don't know'

## SCompV/CV?IVI

*to balad ni-st-i be-zar-i*

(you knowledgeable neg-are-you sub-put-you) 'you don't know (how) to put'

The other category under 'Other' was QAVIA for the utterance *chetori mi-za:r-i inja:* (how pres-put-you here) 'how do you put here'? The categories under Complex in Stage IV were VIOVI for the utterances *mi-x-a:y ma:ma:ni be-gir-am* (pres-want-you subj-catch-I) 'do you want me to catch mum' (this utterance was repeated with different word order) and VIVI for the utterance *mi-x-a:m be-shin-am* (pres-want-I subj-sit-I) 'I want to sit' and *mi-xa:-m be-nevos-am* (Pres-want-I subj-write-I) 'I want to write.'

The phrase type utterances in this stage were limited to cX for the utterance *dige dast* 'and hand' and XcX for *ambulance ma:shin* 'ambulance (and) car'.

### 6.8.2.1 Mahdi's verbs at MLU 3.3

The most notable verb of the sample was *goza:shtan* 'to put' which appeared with present, *goza:r*, or *za:r*, and past, *goza:sht*, roots and an appropriate adverbial. The examples below illustrate this:

(a) present root *za:r* as command:

MAH: *ba: ba: na-za:r*

(daddy neg-put)

'daddy don't put'

(b) present root *za:r* as subjunctive verb

MAH: *to balad ni-st-i be-za:r-i*

(you able neg-are-you subj-put-you)

'you don't know (how) to put'

(c) the occurrence of *goza:shtan* 'put' with an adverbial and present root

MAH: *chetori mi-za:r-i inja:?*

(how pres-put-you here)

'how do you put here'

(d) the occurrence of *goza:shtan* 'put' in the past

MAH: *did-i goza:sht-am?*

(see-you put-I)  
'did you see I (could) put'?

As is seen above, a verb like *gozashtan* 'put' which can occur with or without an adverbial is treated so by Mahdi. He produced it with appropriate present and past roots. Fletcher's subject, Sophie, also produced the great majority of her verbs with the arguments that would be expected from the adult grammar. In addition Mahdi used the verb *gerftan* 'to hold' with an object in the utterance *ba:ba: pa:m be-gir* (daddy foot-my imp-hold) 'daddy hold my foot' not only to manage to increase the length of his utterance but because *gerft-an* 'to hold' is a verb that requires an object. Fletcher (1985) also noted the same phenomenon. Pinker (1989) argues that children may well use distributional morphology and semantic information to identify particular lexical items belonging to particular categories.

In this sample, Mahdi used the verb *nevesht-an* 'to write' instead of the verb *keshid-an* 'to draw' when he asked his father whether he could draw a car. He also produced the verb *gerft-an* 'to buy' 'to catch' 'to hold' instead of *da:d-an* 'to give' when he asked his father to give him a pen. Mahdi used the wrong verbs but syntactically correctly as shown below:

- MAH: *mi-x-am be-shin-am*  
(pres-want-I subj-sit-I)  
'I want to sit'
- MAH: *be-shin-am*  
(subj-sit-I)  
'sit'
- MAH: *pa:-m be-gir*  
(foot-my imp-hold)  
'hold my foot'
- DAD: *be-shin hala: xub shod*  
(imp-sit now OK became)  
'sit down, now it is OK'
- MAH: *\*ba:ba: xodka:r mi-gir-i be-nevis-am?*  
(daddy pen pres-hold-you subj-write-I)  
'\*daddy will you hold(give) a pen to write'
- DAD: *chi?*

- 'what'?
- MAH: *xodkar*  
'pen'
- DAD: *chi be-gir-am?*  
(what pres-buy-I)  
'what do I buy'?
- MAH: *\*xodka:r mi-gir-i?*  
(pen pres-buy-you)?  
'will you buy, hold, (give) a pen'?
- DAD: *xodka:r be-d-am?*  
(pen subj-give-I)  
'I give you a pen'?
- MAH: *hum*  
'yes'
- DAD: *che ka:r kon-i*  
(what work do-you)  
'what do you (want to) do'?
- MAH: *mi-x-am be-nevis-am*  
(pres-want-I pres-write-I)  
'I want to write'
- DAD: *be-nevis-i?*  
(subj-write-you)  
'to write'?
- MAH: *hum*  
'yes'
- MAH: *\*ma:shin be-nevis-am*  
(car subj-write-I)  
'to write car'
- DAD: *ka:qaz am be-d-am*  
(paper too pres-give-I)  
'I give paper, too'?
- MAH: *hum*  
'yes'
- DAD: *kaqaz be-d-am xodka:r be-d-am be-nevis-i?*  
(paper subj-give-I pen subj-give-I)  
'I give paper, I give pen (in order) you write?'
- MAH: *\*ma:shin be-nevis-am*

- (car subj-write-I)  
\*'write car'
- DAD: *ma:shin be-nevis-i?*  
(car subj-write-you)?  
'you write car'?
- MAH: *hum biboo*  
'yes bi boo (ambulance)'
- DAD: *ma:shino be-gu be-kesh-am*  
(car-omarker imp-say subj-write-I)  
'say I (want to) draw a car'
- MAH: *be-kesh-am*  
(subj-draw-I)  
'I (want to) draw'
- DAD: *naqa:shi be-kesh-i?*  
(picture subj-draw-you)  
'you (want to) draw a picture'?
- MAH: *ma:shin mi-kesh-am*  
(car pres-draw-I)  
'I will draw a car'
- MAH: *a:mbula:ns ma:shin be-kesh-am*  
(ambulance car subj-draw-I)  
'to draw ambulance car'

In respect to the above overgeneralizations, Pinker (1984) proposes that a verb has alternate syntactic constructions (broad-range rules) and in his new theory (Pinker, 1989), there is also an underlying alternation of the verb's lexico-semantic structure (narrow-range rules). He argues that some children overgeneralize these alternations which are not arbitrary, but are constrained by (mostly semantic) criteria. Children are not aware of the subtleties of these criteria at first and overgeneralize. For example, he claims that the right distinction between \* John pulled Mary the box and John threw Mary the box will not be ruled out by the broad-range rule (1984) since they are syntactically correct. So Pinker (1989) argues that 'throw' and 'pull' belong to different narrow-range classes. This argument seems to be true in the case of Mahdi's use of the verbs *nevesht-an* 'to write' and *gerft-an* 'to buy' in stead of *keshid-an* 'to draw' and *da:d-an* 'to give'. Although the verbs *nevesht-an* 'to write', *keshid-an* 'to draw' on the one hand, and *gerft-an* 'to buy', *da:d-an* 'to

give' on the other hand, fall within the same scope of broad-range rules (Pinker, 1984), they belong to different narrow-range classes which Mahdi appeared not to be aware of. Mahdi's father taught him both directly and indirectly to use the verb *keshid-an* 'to draw' instead of ' *nevesht-an* 'to write' and Mahdi used the verbs correctly thereafter. Mahdi hypothesized that the verb *neveshtan* 'to write' could be applied instead of the verb *keshid-an* 'to draw', but when he observed that the verb *keshid-an* is used for drawing a picture, he used it correctly. This seems to justify Pinker's learnability theory that the child hypothesizes whether a certain feature applies to a given verb, thus eliminating any incorrect hypotheses as a result of observing how the verb is used across situations.

We do not aim to discuss the semantic approaches to language acquisition. However, the above brief discussion was noted since sometimes it seems hard to have a definite line between syntactic and semantic explanations.

## **6.9 Faeze's profile and language development at MLU 3.33 (age 2;4)**

### **6.9.1 Faeze's profile at MLU 3.33 (age 2;4)**

Table 6.6 summarises Faeze's language development at MLU 3.33. The focus of Faeze's language is on Stage III since the elements are more evenly distributed in this stage and some progress has been made to Stage IV. The Stage II phrase level elements are seen in abundance. The reason for this is that most of the two-element phrase constructions are expansions of the two-element clause types to three elements. As the profile shows, the expansions are seen in most transitional Stage II-III categories. Most Stage III clause categories are evenly scattered, some expansions are seen in transitional stage III-IV and some progress to Stage IV is observed. In addition, most of the inflections are seen in the word column of the profile. Faeze's language acquisition is probably Late Stage III/Early Stage IV at MLU 3.33.

### **6.9.2 Faeze's language development at MLU 3.33 (age 2;4)**

The most common clause type construction in Stage III was XVI (XVI=14) for utterances such as, *mi-xun-e in* (pres-sound-it this) 'Is there any sound

**Table 6.6 - Faeze's profile at MLU 3.33 (age 2;4)**

<b>A Unanalysed</b>				<b>Problematic</b>								
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes		
<b>B Responses</b>			Normal Response				Abnormal					
Stimulus Type			Totals			Major			Structural		0	Problems
						Elliptical		Reduced				
Questions	Others											
<b>C Spontaneous</b>												
<b>D Reaction</b>			General		Structural		0		Other		Problems	
Stage I	Minor		Response 9			Vocative 2		Other 3		Problems		
	Major	Comm.	Quest.	Statement								
	'V'	'Q' 9	'NegV'	'V'	'N'	12	Other 3	Problems				
Stage II	Conn.	Clause				Phrase				Word		
	VX 4	Q 1	SV 6	OV 6	CompV 2	DN/Pro 4	NAdj 2	Pron 19	V/C + Person 49			
	CompV	SO	SC	XNeg	Other	NN 4	IntX	Aux/I 3	Adj/NV 3	Poss/O 18	be/-bo/-	
	X + S:NP 1	X + V:VP 3	X + C:NP 1	X + O:NP 1	X + A:AP	PrN/Pron 3	Other	Obj/O/ro 3	biy- 9	na/-ne- 2	pl 2	
Stage III	VXY 1	CompVX	XVI 14	SVA	Other 2	Adj/NVI 3	mal	Cop 3	Obj-o 3	mi- 8	ezafe/ 3	
	SOV 3	CompVI 3	XC(V) 2	XCompV 4	PrDN/Pron 1	Other	Other	Other	e/ey 3	def/-e 2	indef/ 3	
	XY + S: NP 2	XY + V:VP	XY + C:NP	XY + O:NP 6	XY + A:AP 4							
Stage IV	+ S 1	VXY+	CompVXY	SOVI 5	Complex 4	Adj/NIVI	PrDNAdj	Aux/ M 3	O 3			
	SAVI 1	Other 4	cX 1	X&X 1	Other							
Stage V	dige	Coord.	Coord. 1 1+	Subord.A+ 1 1+	S C O	Postmod. 1 1+	clause	Postmod. 1+	phrase	-i 3	'aux/PP 3	
	c	Other	Comparative							-e	-tar -tarin	
Stage VI												
	NP	VP	Clause	Conn.	Clause	Phrase	Word					
	Initiator	Complex+	dige	ø	D ø	Pr	CompV	Poss/O ø	ezafe	V reg	ø	
	Coord		badan	Concord	P							
	Other					Ambiguous						
Stage VII	Discourse			Syntactic Comprehension								
	A Connectivity Comment		Emphatic Order		Style							
	Other											
	Total No. Sentences			Mean No. Sentences Per Turn			Mean Sentence Length					

from this (coming from the tape recorder)?: *hanuz na-xabid-am* (not yet neg-slept-I) 'I have not slept yet', *nusha:be xord-am* (soft drink drank-I) 'I drank soft drink' and *qaza: xord-am* (food ate-I) 'I ate food'. Faeze produced CompVI for the utterances *nega: kard-am* (look did-I) 'I looked', *xun mi-y-ad* (blood pres-come-it) 'it is bleeding' (repeated twice), XCompV for the utterances such as *inja: a:tish gerft-e* (here fire caught-aux) 'here has caught fire', *inja:sh pa:re shod-e* (here-its torn became-aux) 'here has torn' and *dota:jishkard-am* (twice toilet did-I) 'I went toilet twice', XC(V) for the utterances *in-a: mush-e* (this-pl mouse-is) 'these are mice', *in mush-e* (this mouse-is) 'this is a mouse', VIso for the utterances *borid-am-esh* (cut-I-it) 'I cut it' and *be-bor-am-esh* (subj-cut-I-it) 'I cut it' and under 'Other' XComp(V)/C(V)? *in-o balad-am* (this-omarker know-I) 'I know this', SCV for the utterance *in-a: mush ni-st* (this-pl mouse neg-is) 'these are not mice' and under Command VXY for the utterance *be-de be-bor-am* (imp-give subj-cut-I) 'give to cut'.

#### 6.9.2.1 Faeze's Transitional Stage II-III at MLU 3.33

In transitional Stage II-III, the expansions are seen for all of the categories as follows:

X + V : VP =3

(1) *inja: a:tish gerft-e* (repeated twice)

X      CompV

---

N V    Aux

(here fire caught-aux)

'here has caught fire'

(2) *inja:-sh pa;re shod-e*

X      CompV

---

Adj V Aux

(here-its torn become-aux)

'here has torn'

The latter utterance has S expansion as well, as illustrated below:

X + S: NP=1

*inja:-sh pa:re shod-e*

S X

---

Pron D

(here-its torn become-aux)

'here has torn'

The other expansions are:

X + C: NP=1

*ota:q xod-am-e*

C X

---

N Pron D

(room self-my-is)

'it is my room myself'

X + O: NP = 1

*in-o be-xun*

O X

---

this-omarker

(this-omarker imp-read)

'read this'

#### 6.9.2.2 Faeze's transitional Stage III-IV at MLU 3.33

The expansions in Stage III-IV are as follows:

XY + A: AP=4

(1) *nerserri ye man mi-r-e*

A XY

---

N D

(Nursery ezafe my pres-go-he)

'he goes my nursery'

(2) *in-o bar-a:m be-xun*

X A Y

Pr Pron

(this-omarker for-me imp-read)

'read this for me'

(3) *ba:ha:-sh ba:zi mi-kon-am*

A X Y

Pr Pron

(with-him play pres-do-I)

'I play with him'

(4) *nerseri ye xod-am mi-r-e*

A X Y

N N D

(nursery self-my pres-go-he)

'he goes my own nursery'

XY+ O: NP=6

(1) *in-o balad-am*

O X Y

Pron-omarker

(this-omarker knowlegeable-(am))

'I know this'

(2) *in mushak xord-am*

O X Y

D N

(this tool ate-I)

'I ate this tool'

(3) *ijsh-am kard-am* (repeated twice)

O X Y

N D

(toilet-I did-I)

'I went toilet'

(4) *aval in-o be-xun*

X O Y

Pron-Omarker

(first this-o marker imp-read)

'read this'

(5) *in-o bara:-m be-xun*

O X Y

Pron-omarker

(this-omarker for-me imp-read)

'read this for me'

XY+S: NP = 2

*xod-e-mun raft-im*

S X Y

—————  
N D

(self-ezafe-our went-we)

'we went ourselves'

*xod-et be-xun-esh*

S X Y

—————  
N D

(self-your imp-read-it)

'yourself read it'

### 6.9.3 Faeze's Stage IV utterances at MLU 3.33

In this stage Faeze produced +S under Command for the utterance *xod-et be-xun-esh* (self-your imp-read-it) 'yourself read it', under Statement, the SAVI category for the utterance *aval xod-am be-g-am* (first self-my subj-say-I) 'I say myself first', AОВI for the utterances *chi ha:la; be-xun-am* (what now subj-read-I) 'what shall I read now', *kodum ha:la; be-bor-am* (which now subj-cut-I) 'Which shall I cut now', which was repeated twice, *jish-am dota: kard-am* (toilet-my twice did-I) 'I did toilet twice' and *abcd aval be-g-am* (abcd first subj-say-I) 'shall I say abcd first'. Of 5 AОВI utterances in this stage four of them were in question form with rising intonation. Faeze also produced the XCompVI category for the utterance *ba:ha:sh ba:zi mi-kon-am* (with-him play pres-do-I) 'I play with him' and under 'Other' the AACompV/CV?I category for the utterance *dige hichi balad ni-st-am* (else nothing knowledgeable neg-am-I) 'I know nothing else', AAACompV/CV?I for the utterance *ala:n dige hichi balad ni-st-am* 'now else nothing knowledgeable neg-am-I) 'now I know nothing else' and CompV/CV?IsIo *balad ni-st-am-esh* (knowledgeable neg-am-I-it) 'I don't know it' which appear to be formulas. The other utterance under 'Other' was SAVO for the utterance *in am nevesht-e xargush* (this too wrote-aux rabbit) 'this has written rabbit'. The VIVIsIo category for the utterance *mi-x-a:m be-bor-am-esh* (pres-want-I subj-cut-it) 'I want to cut it' (repeated twice), *mi-xa:-m be-xor-am-esh* (pres-want-I subj-eat-I-it) 'I want to eat it' and the VIVI category for the utterance *xa:bid-am mi-g-am* (slept-I pres-say-I) '[when]I [want to] sleep I will say' were listed under Complex.

The phrase type utterances in Stage IV were limited to XcX for the utterance *dast o surat* (hand and face) 'hands and face'.

### 6.10 Composite chart for Faeze and Mahdi at MLU3.3

The composite chart for Faeze and Mahdi (Table 6.7) shows that their overall stage placement at MLU 3.3 is probably Late Stage III with neither child as yet using Stage IV structures very often. Most of Stage II Phrase categories are the expansions of two element categories which appeared in transitional Stages II-III and III-IV.

The three-element categories are seen frequently and this shows that the focus of the children's language development is on Stage III. However, SOV and SVA categories did not appear in the children's data. It seems that these structures are rare in Iranian children's language development in this stage. Since a few Stage IV categories are seen in the profile the stage placement at MLU 3.3 was considered Late Stage III.

Some of the inflections are seen in abundance, particularly V/C Person, since these inflections play syntactic and morphological roles and they are entered under both Statement and Word columns.

### 6.11 Comparison of children's profiles at MLU 3.3

Comparison of the profiles at MLU 3.3 (Tables 6.5 and 6.6) shows that Faeze's language development is slightly more advanced in Stage III Clause level than Mahdi's while Mahdi's profile shows that he is more advanced in Stage III Phrase level. The focus of both children's language development is on Stage III and they have both made some progress into Stage IV. Faeze's Stage II-III language development is seen in most categories while Mahdi's is seen only for Object elements in this stage. However, the children had similar Stage III-IV patterns and their Word level, except in the case of Poss/O and negative inflections, were alike. Faeze's Stage III Clause level was more complete and varied than Mahdi's. Faeze's use of VIso in Stage III showed that she had made a slightly greater advance than Mahdi into this stage. However, the majority of Stage III categories were common to both children.

**Table 6.7 - Composite chart for Mahdi and Faeze at MLU 3.3**

A Unanalysed				Problematic							
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes	
B Responses			Normal Response					Abnormal		Problems	
Stimulus Type			Major			Reduced		Full	Minor	Structural	0
			Elliptical			Reduced		Full	Minor	Structural	0
Questions		Totals									
Others											
C Spontaneous											
D Reaction			General		Structural		0		Other	Problems	
Stage I											
Minor	Response 19				Vocative 6		Other 16		Problems		
Major	Comm.	Quest.	Statement								
I	'V' 14	'Q' 9	NegV	V	N	19	Other	11	Problems		
Conn.	Clause					Phrase			Word		
Stage II	VX 6	QX 1	SV 2	OV 2	CompV 3	DN/Pro 9	NAdj	Pron 40	V/C +	Person	
	CompV		C(V) 13	VI 15	VV	NN 5	IntX	Aux/I 3	101	Poss/O	
			SO	SC 1	Other	PrN/Pron 4	Other 1	Adj/NV 3	19	be-/bo-/	
	XA 2		XNeg					Obj/O/ro 3	12	biy-	
Stage III	X + S:NP 1	X + V:VP 3	X + C:NP 1	X + O:NP 3	X + A:AP				8	mal 3	
	VXY 2		XVI 28	SVA	Other 4	Adj/NVI 8		Cop 10	2	na-/ne-	
	CompVX		VISlo 2	XC(V) 5		DNAdj 2		Other 3	5	pl	
			SOV	XCompV 5		PrDN/Pron 1			3	Obj/-o	
Stage IV	XY + S: NP 3	XY + V:VP	XY + C:NP 2	XY + O:NP 7	XY + A:AP 4				24	mi-	
	+ S 2		SOVI	Complex 8		Adj/NVI		Aux/ M 7	3	ezafel	
	VXY+		AOVI 5	SVISlo	Other 8	PrDNAdj		Other	6	eley	
	CompVXY		XCompVI 5	Other 8		cX 1			8	def/ -e	
			SAVI 1			XcX 2			2	indef/	
Stage V	dige	Coord.	Coord. 1	1+		Postmod. 1	1+		3	aux/PP	
	badan	Other	Subord.A+ 1	1+		Postmod. 1+	phrase		3	-e	
	c		S	C	O				3	-tar	
	s								3	-tarin	
	Other								3		
Stage VI	(+) NP	VP	Clause	Conn.	Clause	Phrase	Word				
	Initiator	Complex+		dige	ø	D ø		Poss/O	ø		
	Coord			badan	↔	Pr		CompV	ø	v	
				c	↔	P			ø	reg	
				s	Concord				ø		
	Other							Ambiguous			
Stage VII	Discourse			Syntactic Comprehension							
	A Connectivity		Emphatic Order		Style						
	Comment		Other								
Total No. Sentences	Mean No. Sentences Per Turn			Mean Sentence Length							

The most common Stage III representation for the children was XVI and both children appeared to be in Late Stage III at MLU 3.3.

## **6.12 Summary and Conclusion**

In this chapter the MLUm measure was used as an index to order the samples of the children at the early stages of their language development. The detailed analyses of the children's language acquisition at approximately equal MLU values were profiled on the PLARSP charts. The stages of the children's language were decided according to the focus of the child's language and the distributional balances of the categories on the PLARSP charts. In addition, although the PLARSP charts in this chapter provided a general summary of the children's language at particular MLU values, a close examination of the children's samples was also important. This was carried out since the existence of formulas could inflate the estimate of the children's productive language and might affect the assignment of the stage placement for them.

Overall, as was seen in this chapter, the children used different as well as similar routes into language acquisition. However, there was a fairly steady progression down the chart in relation to MLU for all children under study and the hypothesis concerning the assignment of constructions to particular stages based on the number of elements was consistent with the data.

The next chapter will investigate and profile the children's language according to age in the later stages of their language development when the MLU measure tends to be less valid.

## **Chapter 7 The Children's language development according to age (later stages)**

### **7.1 Introduction**

In Chapter 6 we found that MLUm was a useful device to order the children's samples at the early stages of their language development. The PLARSP charts showed a steady progression of the children's language development according to MLU. In this chapter the samples are ordered according to age in the stages where MLUm tends to have less validity. As we saw earlier, there was a significant correlation between MLU and age. In this chapter, two of the children were studied at equal age points (2;8 & 3) and their language development was investigated and mapped onto the PLARSP charts. The PLARSP profiles also showed the constant progress of the order of emergence of structures in the children according to age. This investigation was again based mainly on the 100 utterance samples which were used in the design of the MLU measure and the PLARSP chart. Some specific features of the children's language were described through the examination of the whole sample. In this chapter, like Chapter 6, Minor utterances were considered. The stages were decided according to the criteria explained in Chapter 6.

### **7.2 Mahdi's profile and language development at age 2;8 (MLU 4.45)**

Most of the sample is about a conversation between Mahdi and his mother when they were looking at a story book with pictures. At the time of recording, Mahdi's elder brother (Mohammad) and his father were present, but they did not feature in the transcript.

#### **7.2.1 Mahdi's profile at age 2;8**

As is seen in table 7.1 some of the Stage IV Clause categories, particularly Complex, occur frequently. Some of the transitional Stage III-IV categories are seen and some progress has been made to Stage V.



The expansion of subject elements in transitional Stage III-IV are not seen since most of Mahdi's utterances are subjectless in the sample. The emergence of modal auxiliaries and the progressive *da:r* 'have' in Mahdi's speech, considered as VI, have resulted in overloading of categories of four or more than four elements under Complex at Stage IV Clause level. Most of the inflections are seen in abundance in the Word column. Mahdi's language development can be classified as Stage IV.

## 7.2.2 Mahdi's language development at age 2;8

### 7.2.2.1 Stage IV

The most common Stage IV category is complex utterances. Most categories in this stage consist of more than four elements so they are listed under Complex or Other. It is worth mentioning that *da:r* 'have' with three imperfective forms (*da:r* 'have' *da:sht* 'had' and *da:sht-e* 'has had') expresses the progressive in Persian. Winfuhr (1979) calls a form such as *da:r* 'have' an 'aspectual auxiliary'. This form appeared frequently in this sample and *da:r* was considered as a main verb since it receives all inflections that a verb requires and has the same complexity for the child that the main verb inflections may have. The examples below from the data illustrate the use of *da:r* 'have' by Mahdi.

1) *da:r-e mi-bin-e in-a:*

(have-he Pres-see-he this-pl)

VI VI O

'he is seeing these'

2) *da:r-e shena: mi-kon-e*

(have-he swim pres-do-he)

VI CompVI

---

NVI

'he is swimming'

3) *da:r-an mi-r-an hava:*

(have-they pres-go-they air)

VI VI A

'they are going (into the) sky'

4) *da:r-e in tariki mi-bin-e*

(have-he this darkness pres-see-he)

VI S A VI

'he is seeing (in the) dark'

5) *da:r-e inja: mi-bin-e*

(have-he here pres-see-he)

VI A VI

'he is seeing here'

6) *da:r-e jangal-a: mi-yar-e inja:*

(have-he forest-pl pres-bring-he here)

VI O VI A

'he is bringing forests here'

7) *deraxt dar-e mi-xor-e*

(tree have-he pres-eat-he)

O VI VI

'he is eating tree'

8) *da:r-e ma:shin mi-kesh-e*

(has-he car pres-pull-he)

VI O VI

'he is pulling (a) car'

9) *in dar-e in-a:-ro mi-riz-e*

(this have-he this-pl-Omarker pres-pour-it)

S VI O VI

'this is pouring these'

10) *dar-e mi-d-e be in*

(have-he pres-give-he to this)

VI VI A

'he is giving to this'

- 11) *da:r-e fara:r mi-kon-e*  
 (have-he escape Pres-do-he)  
 VI      CompVI  
 \_\_\_\_\_  
 N VI  
 'he is escaping'
- 12) *da:r-e shena: mi-kon-e*  
 (have-he swimming Pres-do-he)  
 VI      CompVI  
 \_\_\_\_\_  
 N VI  
 'he is swimming'
- 13) *da:r-e in-o tofang mi-zan-e*  
 (have-he this-Omarker gun Pres-hit-he)  
 VI      O      CompVI  
 \_\_\_\_\_      \_\_\_\_\_  
 Pron-Omarker      N VI  
 'he is shooting this'
- 14) *da:r-e mi-r-e hava:*  
 (have-he Pres-go-he air)  
 VI      VI      A  
 'he is going (into the) sky'

As is shown above, *da:r*, according to the context, mostly appeared with the third person singular inflection. Once when Mahdi wanted to use it for the first person singular, he made an error and produced it with the third person singular inflection as is shown below:

- 15) *\*da:r-e to az ina: mi-xar-i*  
 (have-he you of this-pl Pres-buy-you)  
 'You are buying of these'



- 5) *inja: ne-mi-tun-e be-r-e*  
 (here neg-Pres-able-he Subj-go-he)  
 A VI VI  
 'he cannot go here' (Mahdi points to a picture)

As is seen above, auxiliaries and modal auxiliaries precede the subjunctive form of the main verb. The structure of the subjunctive form is *be-bo-biy-* + present root + person and number inflection. One case of error was observed when Mahdi produced auxiliary *xa:st-an* 'want' with a verb preceded by the prefix *mi-* instead of *be-bo-biy*, as illustrated below:

- 6) *\*mi-x-a:d asb-ro mi-bar-e*  
 (Pres-want-he horse-Omarker Pres-take-he)  
 'he wants to take the horse'

The phrase expansion is seen in No 4.

Two cases of SAVI for the utterances

*man to in mi-shin-am*  
 (I in it Pres-sit-I)  
 S A VI

—  
 PrPron  
 'I sit inside this',

*in intori mi-r-e*  
 (this like this pres-go-it)  
 S A VI  
 'this goes like this'

and one case of SOVI for the utterance

*daynasor in-o mi-gir-e*  
 (dinosaur this-Omarker pres-catch-it)

S O VI

—  
 Pron-Omarker

'dinosaur is catching it'

were seen. The Complex category was also used for the utterances such as *da:r-e mi-y-ad* (have-he Pres-come-he) 'he is coming', *\*da:r-e mi-y-a:n* (have-he Pres-come-he) 'they are coming', *mi-x-a:m be-bor-am* (Pres-want-I subj-cut-I) 'I want to cut' and under Other the SVIsIoA category was produced for the utterance *in mi-ya:r-e-sh birun* (this Pres-bring-he-it out) 'this is bringing it out'.

#### 7.2.2.2 Stage V

As is seen the Stage V categories are limited to Coord.(under command) =1, Coord. (under Clause) =1, Subord. clause A = 1 and Subord.Clause O = 2. No word connectors are seen. In Coord. two or more independent clauses are coordinated by a connector word or Ø. The utterances are as follows:

Coord. (under command)

*man mi-r-am to in-o be-yar mi-sh-e*

(I Pres-go-I You this-Omarker imp-bring pres-possible-it

S VI cØ SO V VI

'I am going you bring this, is it possible?'

Coord. 1

*in leba:s-esh dar ovord-e raft to a:b*

(this clothes-his take off-Aux went in water)

S O V cØ V A

— —  
 ND V-Aux

'this has taken his clothes off went in water'



forms of subjects, particularly personal pronouns. A careful examination of the sample showed that most of Mahdi's mother's speech began with *in* 'this' and rarely with *un* 'that', e.g. *in chi-ye* (this what-is) 'what is this', *un chi-ye* (that what-is) 'what is that'. Use of *in* 'this' and *un* 'that' by the mother was usually accompanied by pointing. This sample clearly justifies the advantage of video-recording in data collection. Fletcher (1985) reported that he had no video-record of gestures in relation to conversation between Fran and Sophie. So he could not argue the proximal/distal contrasts on the basis of firm evidence. Although the 'explicit contrasts between 'this' and 'that' in input to children may be rare' (Fletcher, 1985; 80), Mahdi's mother pointed to the pictures to show, particularly, proximal and, rarely, distal contrasts to Mahdi. Mahdi's use of *in* 'this' perhaps reflected its frequency of use in his mother's speech. The example below illustrates this:

- MAH: *in chi-ye?* (pointing to a picture in the book)  
(this what-is)  
'what is this'
- MOT: *ne-mi-dun-am. in fil-e* (pointing to another picture in the book)  
(neg-pres-know-I. this elephant-is)  
'I don't know. this is (an) elephant'
- MAH: *fil-e?*  
(elephant-is)  
'is it (an) elephant?'
- MAH: *in fil-e* (pointing to the picture that his mother did not know)  
(this elephant-is)  
'this is (an) elephant'
- MOT: *in chi-ye in chi-ye be man be-gu* (pointing to a picture)  
(this what-is this what-is to me imp-say)  
'what is this, what is this? tell me'
- MAH: *tanguri-ye*  
(tanguri-is)  
'it is tanguri'
- MOT: *in in xob be-ya: be-gu be-shin* (pointing to a picture)  
(this this O K imp-come imp-sit)  
(this this O K come say sit)
- MAH: *in in shotor-e* (pointing to the picture)

(this this camel-is)  
'this this is (a) camel'

Similarly, Mahdi's use of *inja;/unja;* 'here/there' contrast perhaps reflected the frequencies in his mother's speech. He often used the utterance *inja;* 'here' to show proximity. He produced *unja:* 'there' only once when he asked his mother if he could sit farther away from where he was. Mahdi's mother produced the utterance *inja:* 'here' throughout the full sample but there was no evidence of her producing *unja;* (there) in her speech.

#### 7.2.4 A note on Mahdi's Comprehension and Production at age 2;8

There are two ways of forming the present progressive in Persian: 1) The prefix *mi-* precedes the present root + Person and Number Inflection (this form is also used to express simple present and future in Persian) 2) *dar* plus person and number inflection precede present verb. The most striking feature of the sample is the emergence of *da:r* signalling present progressive in Mahdi's speech. This form frequently appeared in Mahdi's language while his mother mostly used 1) above for forming the progressive. Mahdi also produced auxiliary forms in response to his mother's questions when no auxiliary was used in his mother's utterance. The examples below illustrate these:

MOT: *che ka:r mi-kon-e?* (Mahdi's mother is pointing to a picture using the progressive form with *mi-* )

(what do pres-do-it)

'what is it doing?'

MAH: *da:r-e mi-y-a:d* (Mahdi's use of *da:r* 'have' for the progressive in response)

(have-it pres-come-it)

'it is coming'

or

MOT: *che ka:r mi-kon-e?* (Mahdi's mother is pointing to a picture using the progressive form with *mi-* )

(what do pres-do-he)

'what is he doing'

MAH: *da:r-e mi-bin-e in-a:* (Mahdi's use of *da:r* in response)  
 (have-he pres-see-he this-pl)  
 'he is seeing these'

MAH: *mi-xa: d be-bin-e in-a:* (Mahdi's use of auxiliary *xa:h* 'want'  
 in response)  
 (Pres-want-he subj-see-he this-pl)  
 'he wants to see these'

As the above conversation shows, Mahdi understands his mother's speech. Fletcher (1985) names this 'comprehension for understanding' (Cu). Mahdi also produces his sentences in appropriate contexts which Fletcher calls 'comprehension in production' (Pu). In addition, in the absence of any grammatical tests, as Mahdi's mother always pointed to the pictures through the sample and asked Mahdi about the pictures, this could be taken indirectly as an experimental situation. Mahdi produced appropriate grammar using similar tokens in appropriate contexts with different words from his mother. Fletcher calls this production in grammar (Pg). Via Pg information and according to Fletcher (1985), we can estimate Mahdi's grammatical comprehension (Cg) abilities (see Fletcher, 1985 for detail). It seems that Mahdi has the ability to analyze fully the lexical items and their syntactic relations in his mother's speech and answer her using appropriate grammar. The above example shows the mark of syntactic productivity in Mahdi's language. The indirect estimation of Mahdi's Cg via the Pg information in this sample is because Fletcher(1985) himself points out:

'... it is possible to address both Cu and Pu directly, by considering maternal and child utterances and their contexts. We can make only an indirect approach to Cg via the Pg information we extract. Provided that this account of Pg is detailed and accurate, it can serve as a conservative estimate of Cg, in the absence of Cg tests that are comprehensive enough to cover the range of grammatical structures relevant to the 2 1/2 to 3 1/2.' (1985; 9)



### 7.3 Faeze's profile and language development at age 2;8 (MLU 4.78)

The conversation is between Faeze and her father in their home. Her mother and her elder brother are at home, but they did not appear in the transcript. The father is video-recording the child and asking her various questions.

#### 7.3.1 Faeze's profile at age 2;8

As is shown in table 7.2, in contrast to Faeze's earlier profile at age 2;4 (table 6.2) the focus of Faeze's language has shifted from Stage III to Stage IV. The Stage IV categories are scattered evenly at Clause level. Some progress has been made to Stage V. Most common inflections occur frequently. Faeze's language development seems to be Late Stage IV.

#### 7.3.2 Faeze's language development at age 2;8

##### 7.3.2.1 Stage IV

Under Command Stage IV, S+ was used for the utterance *to be-band* (you imp-fasten) 'you fasten' and CompVXY+ was used for the utterances

*chasb-o para-sh kon*

X    Comp    Y    V

—        —  
N-Omarker    AdjI    V

(sellotape-Omarker tear-it do)

'tear the sellotape',

*badan neshun-am be-de*

(later show-me imp-give)

X        Comp    Y        V

—————  
N IV

'later show me' and



- 4) *mi-x-a:m be-ya:r-am-esh birun*  
 (Pres-want-I Subj-bring-I-it out)  
 VI                  VisIo    A  
 'I want to bring it out'
- 5) *man in-o mi-za:r-am to ota:q-e xod-et*  
 (I this-Omarker Pres-put-I in room *ezafe* self-your)  
 S O                  VI                  A  
 \_\_\_\_\_  
 Pr N ND  
 'I put this in your own room'
- 6) *inja: hama-sh-o xord-am dige*  
 (here all-it-Omarker ate-I so)  
 A                  O                  VI    A  
 \_\_\_\_\_  
 ND Omarker  
 'I ate all of it so'
- 7) *ba:zam az un-a: bara:-mum ma: dota: xarid*  
 (again of that-pl for us we two bought)  
 A                  A                  A                  A    V  
 \_\_\_\_\_          \_\_\_\_\_          \_\_\_\_\_  
 Pr Pron    Pr Pron          Pron D  
 'she bought those for us, we two, again'
- 8) *mi-x-a:m be-het neshun be-d-am*  
 (pres-want-I to-you show subj-give-I)  
 VI    A                  CompVI  
 \_\_\_\_\_          \_\_\_\_\_  
 PrPron          N VI  
 'I want to show you'

- 9) *man dige ye dune mi-xor-am*  
 (I now on one number Pres-eat-I)  
 S A O VI

---

N D

'I will eat one now on'

- 10) *man ye dune intori mi-xor-am*  
 (I one number like this pres-eat-I)  
 S O A VI

---

N D

'I will eat one like this'

- 11) *man am balad ni-st-am*  
 (I too knowledgeable neg-am-I)  
 S A Comp/C? VI  
 'I don't know, either'

Two passive utterances in this sample are also listed under Other in this stage. The utterances are *pa:ye che tori bast-e mi-sh-e* (tripod how folded up-PP pres-become-it) 'how the tripod is folded up' and *un bast-e mi-sh-e* (that folded up-PP pres-become-it) 'that is folded up'. These two utterances can be classified as S A CompVI and S CompVI, but these categories do not show the function of the passive utterances. Furthermore, since passive utterances are rare in Persian they are listed under Other.

The other categories under Statement in Stage IV Clause level were SOVI=2 for the utterances *man bozorg-o ne-mi-x-a:m* (big-Omarker neg-pres-want-I) 'I don't want the big one' and *xarid-e ma:ma:n gerda:lu sefid-e* (bought-aux mum round white-def) 'mum has bought the white round', AОВI for the utterances *farda: ye dune mi-xor-am* (tomorrow one number pres-eat-I) 'I eat one tomorrow' and *bar-a:m a:da:ms mi-xar-i* (for-me chewing gum pres-buy-you) 'will you buy chewing gum for me', XCompVI for the utterance *che ka:r kard-i* (what work did-you) 'what did you do', SAVI for the utterances *in ba:yad inja: ba:she* (this must here

become-it) 'It must be here', *ma:ma:n bar-a:m mi-xar-e* (mum for-me pres-buy-she) 'mum will buy for me' SVIsIo for the utterance *man ne-mi-bin-am-et* (I neg-pres-see-I-you) and VIVI for the utterance *ne-mi-tun-e be-chasb-e* (neg-pres-can-it subj-paste-it) 'it cannot paste' and *mi-x-a:m be-bor-am* (pres-want-I subj-cut-I) 'I want to cut' were listed under Complex.

### 7.3.2.2 Faeze's Stage V utterances

Coordination and embedding are important in child language because they can be used to produce sentences of greater complexity. Fletcher (1985) points out that 'learning how to use coordination and embedding will be an important part of the child's progress towards mastery of language'. Faeze's use of coordination and embedding, like Mahdi's, was limited at this stage of her language development and the connectors were rarely seen in her speech. She used Other under Command only once for the utterance:

\**bast-ash be-kon diga to ota:q-et be-za:r-am*  
 folded up-it imp-do so in room-your subj-put-I  
 CompV s *dige* A VI  
 'fold it up so I put in your room'

Faeze's embedded utterances were limited to Subord.A+ 1 = 2 for the utterances:

- 1) *intori be-xor-am dige a:da:ms bar-a:m ne-mi-xar-i*  
 (this way subj-eat-I anymore chewing gum for-me neg-pres-buy-you)  
           A          A          O          A          VI  
 sØ A VI  
 'I eat this way you will not buy chewing gum for me anymore?
  
- 2) *age intori be-xor-am bara: ma a:da:ms mi-xar-i?*  
 (if this way subj-eat-I for me chewing gum pres-buy-you)  
           A          A          O          VI  
 s *age* A VI  
 'if I eat this way will you buy chewing gum for me?

Postmod. clause 1 = 1 for the utterance:

- 1) *sefid-e ala:n bar-a:m xarid-i*  
 (white-def now for-me bought-you)  
 'the white you just bought for me'

and Postmod. Phrase 1+ = 1 for the following utterance:

- 1) *az un-a: ke gerda:lu sefid-e*  
 (of that-pl that round white-def)  
 'of those that round the white'

### 7.3.2.3 Faeze's use of modal auxiliaries and auxiliaries

The most notable development, in the children's samples, has been the appearance of modal auxiliaries and auxiliaries. In this section, Faeze's use of modal auxiliaries and auxiliaries will be discussed.

The most common auxiliary type in Faeze's speech, like Mahdi's, was the auxiliary *xa:stan* 'want' considered as a main verb when coding on the PLARSP chart. The modal auxiliaries *tavanest-an* 'can' and *ba:yest-an* 'must' and the auxiliary *shod-an* (become) were produced by Faeze in this sample. Most modals and auxiliaries function syntactically and morphologically like main verbs (see Hyams, 1992) so they were regarded as VI. Faeze produced the auxiliary *shod-an* 'become' to form the passive voice in Persian found very rarely in adult language. She produced the passive utterances when she asked her father to explain how the camera tripod can be folded up. She produced the following utterances: *pa:ye che tori bast-e mi-sh-e* (tripod how folded-PP pres-become-it) 'how the tripod is folded up' and *un bast-e mi-sh-e* (that folded-PP pres-become-it) 'that is folded up'. In Persian, the modal auxiliary *ba:yest-an* 'must' stays unchangeable for the present tense and bears no inflection so this auxiliary was considered as Aux in the children's speech. Faeze produced *bayest-an* 'must' once when she wanted to put the small part of her game somewhere else. She produced the utterance *in ba:yad inja; ba:sh-e* (this must be here) 'this must go here'. She also produced the modal auxiliary *tavanest-an* 'can'

once when she could not stick her game box together with a piece of sellotape. She said to her father *ne-mi-tun-e be-chasb-e* (neg-pres-can-it subj-stick together-it) 'it cannot stick together'. It seems that Faeze has not acquired the causative form of the verb *chasbid-an* 'to stick together' which is *chasba:nd-an* 'cause to stick together'.

#### 7.4 Comparison of the children at age 2;8

As table 7.1 and 7.2 show, Faeze's Stage IV structures are more evenly scattered under Command, Statement and Phrase levels than Mahdi's. Since Faeze produced most of the Stage IV categories we can conclude that she is more advanced than Mahdi at age 2;8. A close examination of the samples showed that Mahdi's conversation with his mother was limited to a story book while Faeze's conversation with her father covered various events. It seems that Mahdi did not have the same opportunities to manifest his linguistic abilities that Faeze did. This suggests that the sample obtained plays a role in determining a child's linguistic abilities (Fletcher, 1985). However, the focus of both children's language is on Stage IV and they have both made some progress into Stage V. Both tables show the steady progression of the children. Stage IV Complex is seen in great number in both profiles since both children's use of modal auxiliaries and auxiliaries has resulted in overloading of more than four-element categories under this category. Both children produced various common inflections under the Word column. The production of Poss/O inflections by Faeze to expand her utterances, about six times more than Mahdi, is notable.

#### 7.5 Composite chart for Mahdi and Faeze at age 2;8

The composite chart for Faeze and Mahdi (Table 7.3) shows that the children's stage placement at age 2;8 is probably Late Stage IV since neither of the children has yet used the Stage V structures frequently. The four-element utterances are evenly scattered and this shows that the focus of children's language is on Stage IV. Most inflections are seen frequently.

### Table 7.3 - Composite chart for Mahdi & Faeze at age 2;8

<b>A Unanalysed</b>				<b>Problematic</b>							
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes	
<b>B Responses</b>				Normal Response				Abnormal		Problems	
Stimulus Type Questions Others				Major				Structural			0
				Elliptical		Reduced	Full				
				Totals							
<b>C Spontaneous</b>											
<b>D Reaction</b>				General		Structural		0		Other	Problems
Stage I	Minor	Response 16				Vocative 2		Other		Problems	
	Major	Comm.	Quest.	Statement				Other		Problems	
		'v' 4	'Q' 1	'NegV'	'V' 6	'N'					
Stage II	Conn.	Clause				Phrase				Word	
	VX 3	QX 3	SV 3	OV 2	CompV 1	DN/Pro 12	NAdj	Pron 53	V/C + Person 148		
	CompV 1	C(V) 7	SO	VI 9	SC 5	VV	NN 1	IntX	Aux/I 12		
		XA 8	XNeg	Other	PrN/Pron 6	Other	Obj/O/ro 3		Poss/O 37		
Stage III	X + S:NP 1	X + V:VP 2		X + C:NP 4		X + O:NP		X + A:AP		be/-bo/-	
	VXY 2	XVI 21	SVA	Other 2		Adj/NVI 7	mal	Cop 8	biy- 38		
	CompVX 2	VISlo	XC(V) 30	PrDN/Pron	DNAdj 1	Other 1		na/-ne- 16	pl 7		
Stage IV	XY + S: NP 1	XY + V:VP 2		XY + C:NP 4		XY + O:NP 7		XY + A:AP 6		Obj/-o/ 11	
	+S 1	SOVI 3	Complex 31	Adj/NVI 2	Aux/ M 19	PrDNAdj 1	Aux/ O 12	mi- 56	ezafe/ 3		
	VXY+ 3	AOVI 3	SVISlo 1	Other 9	cX 1	Other		e/ey 3	def/-e 4		
	CompVXY 3	XCompVI 1	SAVI 4	Other 9	XcX 1			indef/ -i 8	aux/PP -e 14		
Stage V	dige 1	Coord. 1	Coord. 1	1+ 1+	Postmod. 1	1+ 1+	clause	-tar 14	-tarin		
	c 2	Other 1	Subord.A+ 1	3 1+	S C O 2	Comparative					
	s 2	Other 1	S C O 2	Comparative							
Stage VI	(+)	(-)	NP	VP	Clause	Conn.	Clause	Phrase		Word	
	Initiator	Complex+	dige	ø	D ø	Pr	P	CompV	Poss/O ø	ezafe v reg	
	Coord		c	s	Concord						
	Other	Ambiguous									
Stage VII	Discourse				Syntactic Comprehension						
	A Connectivity		Emphatic Order		Style						
	Comment		Other								
	Total No. Sentences			Mean No. Sentences Per Turn			Mean Sentence Length				

## 7.6 Mahdi's profile and language development at age 3;0 (MLU 4.48)

### 7.6.1 Mahdi's profile at age 3;0

Table 7.4 shows Mahdi's profile at age 3;0. The major change in the profile for this sample is some progress of the Stage V categories, particularly the emergence of coordinator and subordinator words under Conn. An even distribution of elements in Stage IV is also seen and the common inflections are frequent. Mahdi's language can be assigned to Stage V.

### 7.6.2 Mahdi's language development at age 3;0

Mahdi's learning of coordination and embedding and the use of connector words show his progress towards mastery of the language. A glance at table 7.1, when Mahdi is at age 2;8, reveals no entries under Post mod. and Conn in comparison to Table 7.4 when he is 3. However, the number of Stage V sentences is small and we can list them at this level. Fletcher (1985) also estimated that the proportion of complex sentences for a child at Sophie's language level (age 3) would be between one percent and ten percent. The coordinated sentences from Mahdi's sample below show the simplest kind of coordination of two independent clauses linked by *dige* 'also', *unvaqat* 'then' and Ø.

Coordination:

a) *in-a: tiger-an in-a: dige tiger-an*

(this-pl tiger-are this-pl also tiger-are)

S C(V) S cdige C(V)

'these are tigers, these are also tigers'

b) *man shish-ta: happybirt da:sht-am happy birt-am unvaqat shirin bud*

(I six number happybirth (candles) had-I happybirth(cake)-my then sweet was)

S O VI S cunvaqat C V

'I had six cakes my cake then was sweet'

**Table 7.4 - Mahdi's profile at age 3;0 (MLU 4.48)**

<b>A Unanalysed</b>				<b>Problematic</b>																																																																																																																																																																																																																					
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes																																																																																																																																																																																																															
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*kado ne-mi-dun-am kado chi hast*  
 (present neg-pres-know-I present what is)  
 'O VI O  
 sØ S C V  
 'present I don't know what present is'

The above subordinators have some intra-clause difficulties which do not appear to affect the embeddings. Fletcher (1985) also found the same problem with Sophie's subordinating utterances. In addition, one case of clausal post-modification but no case of phrasal post-modification is seen in Mahdi's sample.

Postmod. 1+

*kes-i ke mi-xa:-d sohbat kon-e ba:yad in traktor be-ya:-d pa:ein*  
 (one-def that pres-want-he speech do-he must this tractor subj-come-it  
 down) A S V  
 S VI s ke CompVI S VI A  
 —————  
 N D NVI DN Aux V  
 '(for) the one who wants to speak this tractor must come down'

#### 7.6.2.1 Subject realization and Personal Pronouns

In contrast to Sophie's subject realization at age 3, which was very limited, Mahdi produced most of the subject pronouns in the form of inflections in this sample, e.g.

*dust dar-am arh:n* (-am first person singular)  
*porteqa:l xord-an* (-an third person plural)  
*mi-za:r-i in traktor be-ya:-d pa:ein* (-i second person singular and- d third person singular)  
*sha:x mi-zan-e* (-e third person singular)

The 1st and 2nd person plural pronouns did not appear in the sample and they were not seen in the father's speech either. An examination of the earlier samples showed no evidence of the production of the above

pronouns in Mahdi's parents' speech. This may suggest that the acquisition of pronouns depends on the input that the child is exposed to. It is worth noting that Persian does not distinguish between subject, object and possessive pronouns so Mahdi did not produce any wrong forms for pronouns. But this can happen in English. For example, Sophie produced 'me' in subject position when she was the same age as Mahdi (Fletcher, 1985).

The third person and first person singular inflections were used earlier than the others in Mahdi's samples. The emergence of the remainder of the pronouns was not predictable. At this age, most of Mahdi's utterances were subjectless and mostly corresponded to common adult speech.

## **7.7 Faeze's profile and language development at age 3;0 (MLU 5.22)**

This sample is a video-taped conversation between Faeze and her mother in their living room when they are looking at a Persian story book with pictures. Faeze's father is at university and his older brother at nursery school.

### **7.7.1 Faeze's profile at age 3;0**

A visual comparison of the profiles 7.2 and 7.5 shows more appearance of coordinating and subordinating connectors under Conn. The focus of the child's language has shifted from Stage IV to Stage V. The profile shows further development in Stage V categories between table 7.2 and 7.5. Faeze's use of postmodifying clauses suggests that her language is more advanced than Mahdi's (see chart 7.4) at this age. Most of the common inflections are present. Faeze's language development seems to be at Stage V.

### **7.7.2 Faeze's language development at age 3;0**

We notice in Faeze's language a further development in her complex sentences. Her coordinations, which had limited linking words, now are



linked by *badesh* 'then' and *dige* 'also'. She produced clausal coordinations with missing subjects in both clauses. Fletcher (1985) found no ellipses in Sophie's second clause at age 3. This is true in the case of Mahdi's production of coordinations. However, Faeze produced the utterances with ellipses and this suggests that her language development is more advanced than Mahdi's at this age. The clausal coordinations below from Faeze's data illustrate this:

*ba:yad qaza:-sh-o be-xor-e badesh be-r-e madrese*

(must food-his-omarker subj-eat-she then subj-go-she school)

O VI *cbadesh* VI A

—————  
Aux VI

'she must have her meal then go to school'

*pestunak-esh mi-d-e dige mi-xa:bun-e*

(bottle-her pres-give-she also pres-sleep-she)

O VI *cdige* VI

'she feeds her also makes her sleep'

Additionally, Faeze's use of the causative verb *xa:ba:nd-an* 'make or cause to sleep' in the latter is notable. Faeze produced the following utterance under Command:

Other

*na-xor-in a:da:ms bad-e dige bara:hamin dandune-tun dard mi-kon-e*

neg-eat-you(pl) chewing gum bad-is so for this tooth-your ache pres-do-it

VI A A  
sØ S C(V) s *dige bara: hamin* S CompVI

—————  
ND AdjVI

'don't eat chewing gum(because) chewing gum is bad so for this (reason) your tooth aches'

Most of Faeze's subordinations occurred with the verb *goft-an* 'to say' since Faeze was describing a story from a book. She used the



*goft dige in kar-ro na-kon*

(said no more this work-Omarker neg-do)

V                    O  
 sØ    A        O                    V

—————  
 D N-omarker

'He said not to do this any more'

Faeze also produced the following postmodified utterances:

Postmod.1

*hamun englisi-ye*

(that English-is)

'the one that is English'

*unja: dars mi-d-an*

(that place lesson pres-give-they)

'that place (that) they teach?'

Postmod. 1+

*ye dust da:sht-am television da:sht ota:q da:sht*

(one friend had-I television had room had)

S            VI                    O

—————  
 Clause1            Clause 2

'I had a friend(who) had television (and) had room'

No evidence of any phrasal postmodification was seen in this sample but this structure was produced once by Faeze when she was 2;8. Fletcher (1985) also did not find this structure in Sophie's data when she was 3. As is seen above, Faeze produced multi-clause utterances to increase the length of her speech. When Faeze began to link clauses we, like Crystal (1974:295), were faced with the problem of deciding where one unit of speech ends and the next begins. This was solved with the help of intonation.

## 7.8 Composite chart for Mahdi and Faeze at age 3

The composite chart for Faeze and Mahdi (Table 7.6) shows that their overall stage placement at age 3 is probably Stage V. Most of the stage V categories are scattered and the children's language has shifted from Stage IV to Stage V. The connectors and the commonly-used inflections under Word column are seen in abundance. The relative order of appearance of phrasal and sentential coordinations and their characters were considered for the stage placement of the children since the number of coordinations are limited. Paul (1981) found that the proportion of complex sentences in samples from pre-school children would be an average about 10%.

## 7.9 Comparison of the children at age 3;0

Comparisons of the profiles (Tables 7.5 & 7.6) show that both children have made some progress into Stage V. The majority of Stage V categories, e.g. connectors, Coord.1 under Statement and Subord. Object, were common to both children. Faeze's more use of Postmodifying clauses show that her language is slightly more advanced than Mahdi's at this age.

## 7.10 Summary and conclusion

In this chapter, two children's language development was examined and profiled on the PLARSP charts at age points 2;8 and 3. The PLARSP chart provided an acceptable fit with the data since the profiles showed the steady progression of the children's language development according to age, too. The overall stage placements of the children were reasonably close to the MLU and LARSP norms although there is no necessary reason why two languages should agree in their norms of development. The table below shows MLU and LARSP norms as well as the children's norms for this study.

**Table 7.6 - Composite chart for Mahdi & Faeze at age 3;0**

A Unanalysed				Problematic																	
1 Unintelligible		2 Symbolic Noise		3 Deviant		1 Incomplete		2 Ambiguous		3 Stereotypes											
B Responses				Normal Response				Abnormal													
Stimulus Type				Major				Structural				Problems									
				Elliptical		Reduced		Full		Minor			0								
Questions		Totals																			
Others																					
C Spontaneous																					
D Reaction				General		Structural		0		Other		Problems									
Stage I				Minor		Response 18		Vocative 1		Other		Problems									
Major				Comm.		Quest.		Statement													
				'V'		'Q' 4		'NegV' 'V'		'N'		Other 3		Problems							
Stage II				Conn.				Clause				Phrase				Word					
				VX 1		Q 8		SV 6		OV 5		CompV		DN/Pro 14		NAdj		Pron 43		V/C + Person 76	
				CompV		SO 6		SC 4		VV		NN 9		IntX		Aux/I 2		Adj/NV		Poss/O 16	
				XA		XNeg 1		Other 1				Other		Obj/O/ro 8							
Stage III				X + S:NP 2		X + V:VP		X + C:NP 7		X + O:NP		X + A:AP									
				VXY 2		XVI 8		SVA Other		Adj/NVI 3		mal 2									
				CompVX		VIslo 4		XC(V) 9		DNAdj 3		Cop 4									
				SOV 4		CompVI 3		XCompV 1		PrDN/Pron 1		Other 1									
Stage IV				XY + S: NP 8		XY + V:VP 3		XY + C:NP 4		XY + O:NP 6		XY + A:AP 3									
				+S 13		SOVI 4		Complex 6		Adj/NIVI 2		Aux/ M 4									
				VXY+2		AOVI 2		SVIslo		PrDNAdj		O 4									
				CompVXY		XCompVI 2		Other 4		cX 2		Other 3									
				SAVI 3						XcX 3											
Stage V				dige 2		Coord.		Coord. 1 4 1+		Postmod. 1 3 1+		1									
				c 1		Other 1		Subord.A+ 1 1 1+		Postmod. 1+		phrase									
				s 6				S C O 8													
				Other				Comparative													
Stage VI				(+)				(-)													
				NP		VP		Clause		Conn.		Clause		Phrase		Word					
				Initiator		Complex+		dige		ø		D ø				Poss/O ø					
				Coord				badan		→		Pr		CompV		ezafe v					
								c		←		P				reg					
								s		Concord						ø					
				Other								Ambiguous									
Stage VII				Discourse				Syntactic Comprehension													
				A Connectivity		Emphatic Order															
				Comment		Other				Style											
Total No. Sentences				Mean No. Sentences Per Turn				Mean Sentence Length													

Table 7.7

LARSP age norms for each stage	MLU value for each Stage	Children's norms
Stage I (0;9-1;6)	Stage I (1.75)	Shahrzad Late Stage I MLU 1.24 , age 1;8
Stage II(1;6-2)	Stage II (2.25)	Shahrzad Stage II MLU 1.98, age 1;11
Stage III(2-2;6)	Stage III(2.75)	Mahdi Late Stage II MLU 2.18, age 2;2
Stage IV(2;6-3)	Stage IV(3.50)	Mahdi Late Stage III MLU 3.3, age 2;5
Stage V (3-3;6)	Stage V (4)	Faeze Late Stage III/Early Stage IV MLU 3.33, age 2;4 Mahdi StageIV age 2;8 (MLU 4.45) Faeze Late Stage IV age 2;8 (MLU 4.78) Mahdi Early Stage V age 3 (MLU 4.48) Faeze Stage V, age 3 (MLU 5.22)

## Chapter 8 - Testing some recent hypotheses against Persian data

### 8.1 The grammatical basis of early utterances

#### 8.1.1 Introduction:

There are different techniques for analysing two-word utterances in children. One of the earliest attempts was made by Martin Braine (1963). He noted that certain words always occurred in a fixed place and never alone. They are sometimes labelled pivots. The other class contained many more words which occurred less frequently, in any position and sometimes alone. They are sometimes called open class words. This was called pivot grammar. Some researchers did not agree with Braine and believed that his proposal was superficial. They made a careful study of the relationship that existed between two-word utterances (see for example, Bloom, 1970; Brown, 1973). These researchers noticed that children showed strong preferences for placing certain words in a particular position. However, the biggest difficulty of pivot grammar was for utterances with two 'open' classes such as mummy sock. Although Brain claimed that O + O construction occurred in a second stage after P + O and O + P such description seemed superficial and could not distinguish between several possible interpretations of two-word utterances. Nevertheless, the above researchers as well as numerous investigators who had worked independently on other children (e.g. Brown and Fraser, 1964; Miller and Erwin, 1964), confirmed the consistency found in the utterances of young children. With the revival of Transformational Grammar in the form of Principles and Parameters Theory (Chomsky, 1981, 1986), many researchers have followed Chomsky's nativist view and believe that children do have a system that conforms in basic ways to the syntactic patterns of the language being learned (e.g. Tager-Flusberg et al., 1982; Lust and Chien 1984; Clahsen and Muysken, 1986; see also Goodluck, 1986, 1991 and Lust, 1983, 1986). The other evidence that seems to confirm the grammatical basis of child language is subjectless utterances in the early speech of the children (Goodluck, 1991; Hyams, 1992, 1993). The core of this account is that all children begin acquisition with the null subject value of the parameter. Children in non-null subject languages like English have to reset the parameter. In contrast to the

above nativist claims, there are strong cognitive/information processing views, for example, 1) children drop major constituents of a sentence, such as subject, as a function of the underlying complexity of the utterance (L. Bloom, 1970; P. Bloom; 1990, Valian, 1991); 2) children reproduce what they hear (Pizzuto and Caselli, 1992)

In this section, we do not intend to explain the above theories, instead those who are interested are referred to the authors' work. This study aims to test some proposals of the above researchers against Persian data. For example, the view that the phrase structure components of the grammar offer a basic example of parameterization, that is, configurational languages may be head-initial or head-final (Goodluck, 1991), will be tested on early acquisition of the phrase structure components of Persian.

Five samples were selected from Shahrzad's and three samples from Mahdi's data when Shahrzad was 1;8, 1;11, 2, 2;1 and 2;2 and Mahdi was 2;2, 2;3 and 2;4. These samples were used to test the above hypothesis.

### **8.1.2 Persian Phrase Structure components:**

Chomsky (1986) suggests that children might know in advance that language structures have one key word, or head and they have to find out the position of the subsidiary words or modifiers. Since in English the head of the phrase is generally on the left and modifying material is built up to the right, it is right-branching. According to this proposal, Persian with a mostly SOV basic word order - building up a modified structure to the left of the head - is left-branching. In Braine's study (1963) and also Bloom's study (1970) initial pivots were more frequent than final pivots. If pivots represent a head position the child has already adjusted to the fact that English is right-branching. This test was carried out on the two Iranian children to find out whether in Persian unlike English the final pivots were more frequent than initial pivots. The findings appeared to confirm the hypothesis that the children have already tuned into the fact that Persian is left-branching. The examples below illustrate that the two-word utterances in the Iranian children's data are mostly pivot final

(1) <i>zad</i> as pivot-final	(2) <i>ba:la:</i> as pivot-final	(3) <i>na</i> as pivot-final
<i>in zad</i> 'this hit'	<i>ba:ba; ba:la:</i> 'daddy up'	<i>ma:ma:n na</i> 'mummy no'
<i>ma:shin zad</i> 'car hit'	<i>man ba:la:</i> 'me up'	<i>in na</i> 'this no'
<i>ampul zad</i> 'injection hit'	<i>boro ba:la:</i> 'go up'	<i>did na</i> 'car no'
<i>inin zad</i> 'this this hit'	<i>xodet ba:la:</i> 'yourself up'	<i>puf na</i> 'blow no' *
<i>mosht zad</i> 'box hit'		<i>xodet na</i> 'yourself no'
		<i>hapu na</i> 'dog no'

(4) *xune* as pivot-final      (5) *man* as pivot-initial

<i>ha:pu xune</i> 'dog home'	<i>man ba:la:</i> 'me up'
<i>ba:ba: xune</i> 'daddy home'	<i>man ina:</i> 'me these'
<i>raft xune</i> 'went home'	<i>man in</i> 'me this'
	<i>man ba:la:</i> 'me up'

The above data seem to confirm that the children have a system that conforms in a basic way to the syntactic patterns of the language being learnt.

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\* Shahrzad was afraid of blowing out her birthday candle.

In addition, the expansions of subjects, objects and complements were seen more than the expansion of verbs in the Iranian children's data. The only verb expansion was seen in the case of auxiliary *-e* which also resembles the third person singular, present tense, in Persian. This suggests that it may be easier for Iranian children, in contrast to their English counterparts (see Chomsky, 1986, Goodluck, 1991 and Meisel, 1995 for detail), to expand material to the left. This contrast would also suggest that children become attuned to the phrase structure patterns of the particular language they are learning. For example, Bloom (1970) found that initial pivots were more frequent than final pivots for English speaking children and this may suggest that the child has already tuned into the fact that English is right-branching. Or Lust (1977) in his study of English learning children aged two to three found that they can repeat sentences such as 'the teddy bear walks and sleeps' better than 'the kittens and dogs hide'. Lust concluded that for the English learning children it is easier to repeat the sentences that have a relatively complex phrase on the right-side of the sentence. The conjunction 'walks and sleeps' shows that the right-side of the sentence consists of a more complex phrase while the conjunction of 'the kittens and dogs' presents a more heavier load on the left-side of the sentence. On the other hand, Lust and Wakayama (1979) found the opposite order of difficulty for young Japanese-speaking children whose language, like Persian, is left-branching. The results of this study as well as the above experiments seem to be against P. Bloom's (1990) argument that the beginning of the sentence imposes a heavier processing load than the end of the sentence. It seems that the result of this study agrees mostly with the hypothesis that children rapidly become attuned to the phrase structure patterns of the particular language they are learning (see also Tager-Flusberg et al. 1982; Lust and Chien 1984; Clahsen and Muysken, 1986).

### 8.1.3 Null-subject hypothesis

In this section we will investigate the null subject hypothesis of parameter-setting theory (Hyams, 1984, 1987, 1992, 1993), vs. cognitive/information-processing models of learning (Valian, 1990, 1991, Pizzuto, et al. 1992). This investigation will be based on the data from the three Iranian children in the early stages of their language development.

Hyams (1992) claims that all children start out with a null subject grammar and it is by virtue of learning the core vs peripheral status of inflection (see Chomsky, 1981) in their language that they either persist with a null subject grammar or reset the parameter to disallow null subjects. A parameter called 'pro-drop' or 'null subject' has been proposed to characterise the differences between languages like English and Italian in the omission of pronominal subjects. Hyams (1992, 1993) argues that the omission of subject by children is 'rule-governed'. Persian, like Italian, is a pro-drop language and the verb morphology carries enough information to permit the subject to be dropped. Therefore features in agreement are realised on the verb in the form of overt inflection, while in English they are not. Hyams (1986) presented a parametric analysis of the cross-linguistic development of verbal inflection. She claimed that Italian children set this parameter very early on and knew in advance what constituted a well-formed word and their core grammar in their language. That is, Italian children in the early stages of their language development do not produce bare stem forms like their English counterparts. The English child who starts with subjectless utterances also produces bare stems forms since inflections are peripheral in his grammar. As we saw in the Iranian children's data, most of the children's verbs in Stage I bore an affix. However, the past root without an affix was produced once by each child. Since the past root resembles the third person singular, past tense, in Persian, this form can still be considered as a well-formed word. It seems Hyams' above claim is true in the case of Persian.

The above argument is against the cognitive/information-processing hypothesis that claims children tend to omit major constituents of a sentence, such as the subject, as a function of the underlying grammatical complexity of the sentence. For example, P. Bloom (1990) has attempted to show processing effects on utterance length. He analysed the CHILDES transcripts of Adam, Eve and Sarah and concluded that VP length increases as a function of subject type: null, pronominal, or lexical. Bloom assumes that lexical subjects impose a heavier processing load and, similarly, that pronouns impose a heavier load than null subjects. The heavier the subject, the shorter the VP. P. Bloom, 1990 and Valian, 1991 assume that the child will omit some elements of the utterance as a function of increased complexity.

Bloom's (1990) hypothesis cannot be tested clearly on the three Iranian children's samples since, as explained before, it seems that there are only a few verb expansions in the children's samples at the early stages of their language development. For example, the only verb expansion was seen in the case of auxiliary *-e* and Shahrzad used it with nominal subjects in utterances such as *Masoud keshid-e* (Masoud drew-Aux) 'Masoud has drawn' when she was 1;11. Similarly, Mahdi used the same verb expansion with no subject for utterances such as *la:la: kard-e* (sleep did-Aux) 's/he has slept' when he was 2;2 while Faeze used the same verb expansion with pronominal subjects for utterances such as *inja: a:tish gerft-e* (here fire caught-Aux) 'here has caught fire' when she was 2;4. Shahrzad used the nominal subject with simple verb + Auxiliary *-e*. On the other hand, Mahdi used no subject but a compound verb + auxiliary *-e* in his utterance and Faeze used the pronominal subject + compound verb + auxiliary *-e*. The testing of this hypothesis requires more samples and careful research in Persian. Furthermore, the criteria for counting verb phrase length in Persian should be identified. For example, should the subject and object inflections be counted as verb phrase length? Are the prefixes, *mi-* and *be-* and the negation *na-/ne-*, parts of a verb phrase? This area needs further investigation.

To discuss another point in respect to the above theories, Pizzuto et al. (1992), in favour of the cognitive/information-processing model of acquisition, suggest that at early stages of language development children use names where pronouns would be appropriate especially for self-reference. They emphasise the role of input in language acquisition and assume that this happens because mothers frequently refer to themselves by 3rd person nominal expressions such as 'mummy,' as Strayer (1977) found in his data. This assumption was tested in the early stages of pronoun acquisition of Mahdi. It was found that Mahdi's parents always addressed him or referred to themselves using nominal expressions rather than pronouns. Mahdi also referred to himself as 3rd person nominal. The following examples are selected from Mahdi's data:

Mahdi 2;2

(nominal expressions for father and Mahdi)

DAD: *sa:at mal-e ba:ba:-e*

'it is daddy's watch'

- MAH: *na ma:ma:n.*  
'no mum'
- DAD: *ma:ma:n sa:at na-dar-e*  
'mum does not have a watch'
- MAH: *mahdi*  
'Mahdi'
- DAD: *mahdi na, mahdi kocholu-e sa:at na-dar-e*  
'Mahdi no. Mahdi is a child and does not have a watch'

or

(nominal expression for Mahdi)

- DAD: *mahdi hapu xord*  
'dog bit Mahdi'
- MAH: *na da:da:*  
'no, brother'

Mahdi 2;3

(nominal expression for Mahdi)

- MOT: *mahdi pa:sho berim ba:la;*  
'Mahdi, get up and let's go upstairs'
- MAH: *na na mahdi pa:ein-e*  
'no, no, Mahdi is down'

or

(nominal expressions for mother and Mahdi)

- MOT: *mahdi ma:ma:ni chiy-e?*  
'Mahdi, what is mum?'
- MAH: *mahdi bache xub-e*  
'Mahdi is a good child'

On the other hand, Hyams (1992: 701) claims that Italian children are capable of producing subjects in any form since null subjects are not the result of a deletion or substitution for a lexical pronoun. It is possible for the child to know only one pronoun in the language - the null one. Therefore, it is clear that even if the child has not yet acquired the pronoun forms, s/he does have a pronominal use of names which provides her or him with an alternative to the use of null subjects.

There are many strong and weak points for each of the above arguments and an attempt was made to explain a few points of these theories in relation to Persian data. One of the aims of this study is to provide a descriptive analysis of Iranian children's language development and we do not intend to investigate a particular theory in detail. Instead, whenever we encounter an interesting phenomenon in the children's data, we will try to explain it more clearly by referring to recent arguments.

## 8.2 The role of input in Mahdi's and Faeze's learning of auxiliaries and modal auxiliaries

Gleitman, Newport and Gleitman (1984) claim that the child's learning of some particular categories depends on the incoming information which he or she receives. In their justification of their claim Gleitman et al. used the idea that if the auxiliaries are used in the initial position, uncontracted and stressed by mothers, the child will be provided with sufficient information to construct them. The more the caregiver uses the auxiliaries in initial position the more the child gets information to generalise them syntactically and notices that the elements in pre-subject position and in post-subject, which are usually contracted, are the same. They also found a high correlation between the use of yes/no questions in the input and auxiliary growth in the children's language.

But if auxiliaries are not stressed, contracted or used in the initial position in some languages, like Persian, how can the role of input be justified in such languages? Snow (1995: 193) points out that such 'effects of language structure on children's language systems suggest an enormous susceptibility on the part of language learners to the effects of input'. However, if we look at Mahdi's sample at age 2;5 at MLU 3.3 and Faeze's at age 2;4 at MLU 3.33, the time at which the children began using the auxiliaries in their speech, we find that the auxiliary *xa:stan* 'to want' emerged in both children's speech at this stage. A close examination of the samples suggests that Faeze's father often used the auxiliary *xa:stan* 'to want' when asking Faeze questions throughout the sample while Mahdi's father did not use any auxiliaries in his questions. The examples below are selected from Faeze's and Mahdi's samples:

Faeze has drawn a missile and her father asks Faeze what she wants to do with it.

- DAD:        *mushak-o mi-xa:-y che ka:r-esh be-kon-i?*  
               (missile-omarker pres-want-you what do-it subj-do-it)  
               'what do you want to do with the missile'
- FAA:        *mi-xa:-m be-bor-am-esh*  
               (pres-want-I subj-cut-it)  
               'I want to cut it'

Mahdi's father is speaking about how chewing gum is bad, but Mahdi changes the subject and asks his father if he could catch his mother.

- DAD:        *a:da:ms kasif-e.*  
               (chewing gum dirty-is)  
               'chewing gum is dirty'
- MAH:        *a: da:ms be-xor-im.*  
               (chewing gum subj-eat-we)  
               'let's eat chewing gum'
- MAH:        *ba:ba: mi-xa:-y ma:ma:ni be-gir-am?*  
               (daddy pres-want-you mum subj-catch-I)  
               'daddy do you want me to catch mum'

The above observation suggests that both children used the auxiliary *xa:stan* (to want) similarly in their utterances while in Faeze's sample this auxiliary is seen in the input and in Mahdi's data it is not.

If we look roughly three months after the time at which Faeze and Mahdi used the first auxiliaries, for example table 7.1 and 7.2, we see that the children will exhibit a variety of clause type, phrase type, auxiliaries and modal auxiliaries. This suggests that the children's development has certainly involved the extension of categories, such as auxiliaries, which appeared at earlier stages of their language progress. This advance happens gradually since 'once we have identified in any area of the grammar a structure emerging for the first time, further changes in its form or function may be relatively subtle' (Fletcher, 1985: 197). Perkins (1980) also noted that the

functions of the modal auxiliaries develop into the early school years. Hence, the above replicates Fletcher's (1985: 196, 197) claim that 'a more realistic appraisal of the characteristics of child speech and child-directed speech is required....It is important to emphasise the 'gradual' nature of the changes.' Input seems to have some effects on the children's styles of language learning, but not on the acquisition of core grammar (Fletcher and MacWhinney, 1995).

## Chapter 9 - Summary and conclusion

This study presented a longitudinal study of three Iranian children's language development aged between 1;8 and 3;4. The general patterns in the acquisition of Persian were identified and established. A comprehensive and orderly assessment of children's syntactic development to serve as a guide for Iranian speech and language therapists was provided. In addition, the study described the process of language learning by the children, relating recent theories of language development to data drawn from the children's conversational output. Finally, cross-linguistic comparisons were provided with other research on language acquisition, e.g. English, Irish, Welsh, Italian.

Chapter 1 discussed several relevant themes in language development studies. In chapter 2 background information on Persian was given and some salient features of Persian grammar were presented. We saw that no other significant account of the acquisition of Persian has been carried out. This study is, in fact, the first attempt in this area. One of the aims of the study was to identify and establish the general, structural and functional patterns in the acquisition of Persian. As was said above, this was done to help Iranian speech and language therapists to assess children's language development. To my knowledge, Iranian speech and language therapists do not use an assessment profile based on a body of data and all of their tests and profiles are either a reflection of their own personal experience or translation of foreign sources. Therefore, this study is a helpful guideline for their assessment and remediation programs. Chapter 3 presented a brief description of the data collection method as well as the transcription and analysis of the corpus using a CHAT-like format, and also introduced the subjects of the study. In this research, it was found that although transcribing and analysing data using the CHILDES system is extremely labour-intensive and time consuming, it would provide a reliable and standardised analytic technique for cross-linguistic studies. Furthermore, the technique will make the work on Persian acquisition easier and more reliable for other Iranian researchers. That is, they will be able to consult the computerised corpus and not waste their time having to collect, code and analyse their Persian data. The system was preferred to other

transcription techniques because the CHILDES database is one of the major methodological developments in the area of child language research during the past decade. Corpora of many languages now exist in the CHILDES archive. For example, Brown's data, one of the most comprehensive of the corpora, has been coded and stored in the CHILDES database and many researchers can consult it easily, quickly and effectively for their research. However, in this study, the manual technique was preferred to the CLAN program since one of the aims of the study was not only to give a general picture of the children's language development, but also to examine the striking features of the children's language progress. This required working directly and carefully on the children's language by watching and examining the video-taped data. In addition, the Persian data needs further coding in order to be stored in the CHILDES archive. However, as appendix 1 illustrates, the important initial steps for computerising the corpora have been successfully taken .

As far as the collecting techniques are concerned, the video-taped method was preferred to audio-taping since it captures the larger context and gives more detailed information. For example, during the study the proximal, distal/contrast in Mahdi's speech when he was 2;8 could be clearly investigated by using this technique. In addition, since it seems that environment as well as the context of the speech and mother-child interaction play important roles in the child's language development, video taping was preferred.

Chapter 4 examined the applicability of MLU, one of the most widely used measures for estimating level of language development in English, to Persian. The measure has been used for languages other than English as an intra-language device for comparison of the same child's early language development over time and between children acquiring the same language. It is clear that an MLU count cannot automatically be applied to other languages in the same way as it can in English. The structure of the language and its use by children determine how to calculate this measure. For example, an MLU count in words (MLUw) is more valid for Irish and in Hebrew all consonants of the stem are given a single count. In Persian it was found that, unlike Irish, the application of

a morpheme counting measure was more reliable and effective. MLU in morphemes (MLUm) was used to impose a preliminary ordering on the data during the early stages of the children's language acquisition before a more detailed analysis was carried out. This measure proved valid up to MLUm 4 in Persian. The correlation between MLUm and age was significant so it was decided to investigate and compare the children's language development according to MLUm at the early stages of their language development and age at later stages where MLUm tends to lose its validity. This gross measure can also be used to compare normal and abnormal language development of young children in languages where the approximate MLU norms are available. Certainly, the MLU measure is intended only as a preliminary ordering of the data, which precedes a more complete analysis. This device is a purely intra-linguistic tool and cannot be used for cross-linguistic comparisons and, in fact, it is still doubtful that one will find a cross-linguistic measure to compare two children speaking different languages. In Persian, MLUm was found to be the measure which best assesses grammatical development in young Iranian children and it should be possible to use this measure as an intra-language device for comparison of the same child's language at different intervals of his or her grammatical development and between children acquiring Persian.

In chapter 5, the LARSP framework was adapted to Persian. This measure was selected as the most comprehensive and suitable method to be applied to a body of data. Furthermore, this approach is applicable from the early stages of language development and it is oriented not only structurally, but is also functionally sensitive since utterances are analysed according to their contexts and functions. The PLARSP procedure produces a profile of a sample which can be compared for the same child at different times or for different children at the same stage as well as for abnormal and normal language development. In this chapter, it was found that the chart comprehensively represented the children's development and confirmed the hypothesis concerning the assignment of constructions to particular stages based on their number of elements. In fact, chapter 5 provided a framework for the analysis of language development in Persian and Chapter 6 and 7 made use of this framework to set out the developmental picture of the children's language in more

detail. Basing the information of the PLARSP chart on normal acquisition and its testing against normal longitudinal data are important first steps towards the development of a device to assess language impairment. This chart will also be of great help to Iranian speech and language therapists who do not have any systematic information on the structure of Persian normal language development. It is hoped that by getting feedback from clinicians the later stages of the chart as well as age norms for each stage can be fully achieved. In addition, the LARSP procedure has been adapted to languages other than English with little difficulty, especially in terms of the general structure of the chart. This allows the detection of grammatical features specific to particular languages as well as those common to them. Therefore, useful detailed and systematic information about the structure of that language can be provided and used for cross-linguistic studies as well as research on the issue of universality. For example, Persian is a pro-drop language and the PLARSP profile provides a detailed and at the same time a summarised page of information on Persian for those who are interested in studying the common and specific linguistic features of this group of languages.

Chapter 6 presented a more detailed examination of PLARSP profiles chosen by MLUm. The children's language development was studied, relating recent theories of language acquisition to their progress. In this chapter, the criteria for the stage placement of the children was selected. Like Hickey, three stages for each acquisition level were considered. Formulas in the children's early language development were identified according to Hickey's (1993) guidelines. The children were studied at particular points of their development according to approximately equal MLU scores. One of the children's language development was investigated at an earlier stage than the other two children. This gave a more general picture of the children's language development for further research toward the development of norms for Persian acquisition. We saw in this chapter that the children used different strategies in acquiring Persian. However, all of the children showed a steady progression from one element to several down the chart and the matched samples were mostly similar in showing the children's language progress. Therefore, it was found that MLUm was a useful device to order the children's

samples in the early stages of their language development and the PLARSP charts provided comprehensive pictures of the children's language progress at particular MLU values.

In chapter 7 the samples of two children were ordered according to age in the stages where MLUm measure was not effective. This was carried out to test whether the PLARSP charts could also illustrate the children's language development according to age. The children's language advance was investigated and plotted on the PLARSP charts. The profiles showed the constant progress of the order of emergence of structures in the children according to age, too. It was also found that the overall stage placement of the children was close to English MLU and LARSP norms while there is no reason why these two languages should agree in their norms of development. Hickey (1987) also reported a similar phenomenon in Irish. In this chapter the children's language progress towards mastery was described and was related to similar phenomena found in English (Fletcher, 1985). Both MLUm and age showed the progress of the children's language in this study. Therefore, the PLARSP chart can be used to assess language development of one child over time and compare the children's language advance at their approximately equal MLU values and particular age points. After the completion of the chart it can also be used to assess normal and disordered language development.

Chapter 8 discusses recent theories of child language against Persian data. As said above, Persian is a pro-drop language. Recent hypotheses have drawn attention to subjectless languages to argue the parameter-setting view (Chomsky, 1986, Hyams, 1992, 1993) against the cognitive/information processing claim of language acquisition (Bloom, 1990; Valian, 1991). These recent views in child language acquisition were tested on the children's data. In addition, one part of this chapter discussed the role of input in the development of auxiliaries and modal auxiliaries in the children's speech. It seemed that the input could only affect the style of language learning rather than the learning of the core grammar by the children. It was found that the children's learning of auxiliaries and modal auxiliaries was a gradual development.

## Future research

The structure of Persian is of considerable interest since it shares a number of features with other pro-drop languages and should be able to throw new light on language acquisition in general. Cross-linguistic comparisons are of great importance since every analysis of a new language brings us closer to an understanding of what is universal in the acquisition process.

PLARSP was used to plot the development of three Iranian children. This chart needs to be tested on larger samples of children in order to develop age norms for Persian acquisition. The basing of the chart on normal development and its testing against more normal data of different age ranges are important to develop an instrument to assess, diagnose and treat Iranian children's language impairment. This will result in plotting adequately the later stages of PLARSP chart, too.

Further studies of Persian acquisition would be most effective if the data were computerised. MacWhinney and Bates (1986) and MacWhinney (1991, 1995) have developed an effective computer program for coding and analysing corpora. The computerisation of the Persian data will be useful for further research and global use for those who are interested in research on universal and language specific linguistic characteristics. Although the data of this study has been coded using the CHILDES framework it still needs more careful and precise formatting which is the future plan.

One of the primary goals of designing PLARSP has been to provide detailed and systematic information on Persian language development for Iranian speech and language therapists. We hope that this will motivate them to think systematically about abnormal grammatical development and develop a practical screening procedure based on the PLARSP profile for reasons of speed of application (see Crystal, 1984; Connolly, 1984). It is clear that a set of guidelines as to what subset of the chart would need to be used in order to provide a screening

procedure that is sufficiently rapid and comprehensive would be a useful further aim.

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## Key to grammatical category abbreviations

NegV	Negative Verb		
V	Verb		
N	Noun		
Q	Question		
C	Complement		
A	Adverb		
X Y Z	some grammatical elements		
CompV	Compound Verb		
S	Subject		
O	Object		
Int	Intensifier		
Pron	Pronoun		
Pr	Preposition		
I	Inflection		
Adj	Adjective		
2Aux	2 Auxiliaries		
gen	genitive		
D	Determiner		
Aux/I	Auxiliary in the form of inflection		
VIsIo	Verb + subject Inflection + object Inflection		
Cop	Copula		
VP	Verb Phrase		
NP	Noun Phrase		
AP	Adverbial Phrase		
Aux/M	Modal auxiliary		
omarker	object marker		
Aux/O	Other auxiliaries		
c	conjunction word		
s	subordinated word		
Subord.	subordination		
coord.	coordination		
0	zero		
Postmod.	postmodifying		
Subord A 1+	a clause containing at least two adverbial clauses		
Subord S	a clause containing a Subject element which is itself a clause		
Subord C	a clause containing a Complement which is itself a clause		
Subord O	a clause containing an Object which is itself a clause		
subj	subjunctive	Poss	possessive
pres	present tense	pl	plural
def	definite	obj	object
indef	indefinit	'aux	auxiliary in the form of inflection
PP	Past Participle	1/2/3pl	first/second/third person plural
imp	imperative	/	or
1/2/3s	first/second/ third person singular		

## Key to Conventions and abbreviations

Small captials	grammatical categories
- hyphen,	morphemic boundary in the language material and corresponding division in the gloss
+plus sign, &, _	combined categories in the gloss represented by a single element in the language material
utterances in parantheses	word for word glosses
utterances in inverted commas	translation
utterances in italic	Persian utterances
*	main tiers in samples/errors elsewhere
%mor	morphological analysis of an utterance in samples
%syn	syntactic analysis of an utterance in samples
LARSP	Language Assessment Remediation and Screening Procedure
MLU	Mean Length of Utterance
MLUm	Mean Length of Utterance in morphemes
MLUw	Mean Length of Utterance in Words
MLUs	Mean Length of Utterance in Syllables
PLARSP	Persian Language Assessment Remediation and Screening Procedure

## Persian terms for some PLARSP headings

V	<i>fe?l</i>
N	<i>esm</i>
Q	<i>jomla:t e soa:li</i>
C	<i>motamam</i>
A	<i>qeid</i>
XYZ	<i>maqole ye gra:meri</i>
CompV	<i>fe?l e morakab</i>
S	<i>fa:el</i>
O	<i>maful</i>
Pron	<i>zamir</i>
Pr	<i>harf e eza:fe</i>
I	<i>pasvand gra:meri</i>
Adj	<i>sefat</i>
2Aux	<i>do fe?l e moein</i>
gen	<i>ma:lekiyat</i>
Aux/I	<i>fe?l e moein be surat e pasvand</i>
VIso	<i>fe?l ba: pasvand e fa:eli va mafuli</i>
Cop	<i>fe?l e budan</i>
VP	<i>eba:rat e fe?li</i>
NP	<i>eba:rat e esmi</i>
AP	<i>eba:rat e qeidi</i>
Aux/M	<i>afa:l e moein e xa:s</i>
Aux/O	<i>afa:l e moein</i>
c	<i>horuf e rabt e jomala:t</i>
s	<i>horuf e rabt e eba:ra:t</i>

## Appendix 1: A sample of each child's transcription including syntactic and morphological analyses

@Begin

@Participants: SHA Shahrzad Child, MOT Mother, DAD Father, BRA brother

@Age of SHA: 1,11

@Sex of SHA: female

@Date: 27-Sep-93

@Situation: free talks

\*MOT: na in chiye?

\*SHA: qa:shoq.

%mor: nlqa:shoq.

%syn: N.

\*MOT: na qa:shoq nist boshqa:be.

\*MOT: begu ba:ba: qashoq bedin.

\*MOT: begu qa:shoq.

\*SHA: ba:ba: qa:shoq.

%mor: nlba:ba: nlqa:shoq.

%syn: N N.

\*MOT: changa:lam bedin.

\*SHA: ba:ba: changa:lam bedin.

repetition.

\*MOT: beya: chi da:ri?

\*SHA: qa:shoq.

%mor: nlqa:shoq.

%syn: N.

\*MOT: in chiye in chiye?

\*SHA: qa:shoq.

repetition.

\*MOT: in chiye?

\*SHA: jang,l.

%mor: nlchanga:l.

%syn: N.

\*MOT: changa:le in chiye sh in chiye?

\*SHA: habibirdday.

%mor: nlhabiberdday.

%syn: N.

\*MOT: happy bird daye in.

\*SHA: ha:n.

\*SHA: beya:.

%mor: be-vimplya:.

%syn: <Vimp>.

\*SHA: nakon.

\*MOT: ba:ba: mige roshan kon. begu seda: kon ba:ba:ro begu beya:d.

\*SHA: ba:ba: beya:.

%mor: be-vimplya:.

%syn: <Vimp>.

\*SHA: ro kon bana:melo.

%mor: nlroshan vimplkon.

%syn: <CompVimp>.

\*MOT: ba:ba:sh beya: roshan kon barnamero.

\*SHA: ha:n.

\*SHA: minor.

- \*MOT: chi goft chiye azizam.  
 \*SHA: beya:.  
 %mor: be-vimplya:.  
 %syn: <Vimp>.  
 \*SHA: beya:.  
 %mor: be-vimplya:.  
 %syn: <Vimp>.  
 \*DAD: beya: beya: yek do se ro bexun bebinam.  
 \*SHA: yek do se.  
 \*MOT: az aval yek.  
 \*SHA: do.  
 \*SHA: sterotype.  
 \*MOT: se ha:la: tavalodet bexun. das bezan bexun.  
 \*SHA: na:.  
 \*DAD: beya: tavalodet bexun inam futesh kon.  
 \*MOT: sharzad be ba:ba: begu jurab, be mixa:y da:ram begu.  
 \*SHA: ba:ba: ba:ba:.  
 \*SHA: xodet nada:li.  
 %mor: reflpronlxod-INFlet&2s neglna vlda:r&pres-INFli&2s.  
 %syn: <S VI>.  
 \*DAD: chi na da:ram.  
 \*SHA: nada:li.  
 %mor: neglna vlda:r&pres-INFli&2s.  
 %syn: <VI>.  
 \*MOT: beya: beshin beya: begu be ba:ba: begu az man qashane leba:sam az shoma:  
 qashang nist begu be ba:ba: tavaledo bexun barnamaro mixa:d gush kone  
 barnamaro mixa:d gush kone xob boro boro roshan kon bodo xob eja:ze  
 begir az ba:ba:.  
 \*SHA: eja:ze balna:me do konam?  
 \*DAD: bale.  
 \*SHA: i do konam.  
 %mor: prolin nlroshan vlkon&pres-INFlam&1s.  
 %syn: <S CompVI>.  
 \*DAD: che ka:r kone?  
 \*MOT: in dorost konam.  
 \*DAD: na ba:ba: tavalodo bexun.  
 \*MOT: sharza:d bexunesh ino ki keshede ino ki deshede ino ke keshide ma:ama:n?  
 \*SHA: mashoud keshide.  
 \*SHA: repetition.  
 \*MOT: che ka:r karde masoud?  
 \*SHA: masoud keshide.  
 \*MOT: beya: ina: dava:to bexor.  
 \*SHA: na.  
 \*MOT: dava: mixori?  
 \*SHA: na.  
 \*MOT: dus nada:ri ma:ma:n.  
 \*SHA: na.  
 \*MOT: bedam be ki dava:ro?  
 \*SHA: na.  
 \*MOT: bebin mariz shodi sorfe mikone.  
 \*SHA: na na na.  
 \*MOT: xob ba:she dus nada:ri?  
 \*SHA: do nada:lam.  
 %mor: nldost negna-dar&pres-INFlam&1s.  
 %syn: <CompVI>.

- \*SHA: bezga:l.  
 %mor: be-vimplza:r.  
 %syn: <Vimp>.  
 \*MOT: ha:n?  
 \*SHA: bezga:l.  
 \*SHA: repetition.  
 \*MOT: koja: beza:ram ma:ma: ha:n?  
 \*SHA: beza:l.  
 \*MOT: beza:ram ba:la: ya: pa:ein?  
 \*SHA: pa:ein naza:lam.  
 %mor: adv|pa:ein negna-v|za:r-INFlam&1s.  
 %syn: <A VI>.  
 \*MOT: pas koja: beza:lam?  
 \*SHA: ba:la:.  
 %mor: adv|ba:la:.  
 %syn: 'A'.  
 \*MOT: ba:la:sh beza:ram?  
 \*SHA: ha:n.  
 \*MOT: beza:ram pa:einesh inja:.  
 \*SHA: na na.  
 \*MOT: koja: beza:ram?  
 \*SHA: ba:la:.  
 %syn: adv|ba:la:.  
 %syn: 'A'.  
 \*MOT: mixa:y leba:sa:to jura:beto bekanam?  
 \*SHA: na.  
 \*MOT: dasteto bebinam bebinam tamize dasta:to shosti?  
 \*SHA: aun.  
 \*MOT: shosti?  
 \*SHA: ha:n.  
 \*MOT: bebinam dasta:to dasta:t tamize ya: kasife kasife ya: tamize dasta:t ha:la: che ka:resh konim dasta:to?  
 \*SHA: beturesh.  
 \*MOT: beshama: yek do se ro ba: dasta:t.  
 \*SHA: do se se.  
 \*MOT: ye sher bara:m bexun.  
 \*SHA: ba:ba: yes singing a song.  
 \*MOT: mahsa: omad mahsa begu mahsa: beya: ba:zi mahsa: seda:sh kon sabr kon mahsa: beya:d.  
 \*SHA: beya:.  
 %mor: be-vimplya:.  
 %syn: <Vimp>.  
 \*SHA: masoud beya: tu.  
 \*MOT: beya: tu ba:zi konim chiz ha:sho beya:.  
 \*SHA: beya:.  
 %mor: be-vimplya:.  
 %syn: <Vimp>.  
 \*MOT: masoud masoud beya: ma:ma:n mixa: bebine beya: bebinam chiya: emru a:vordi beya: neshune ma: bede.  
 \*SHA: man am bexolam.  
 %mor: prolman adv|ham be-v|xor&pres-INFlam&1s.  
 %syn: <S A VI>.  
 \*MOT: manam mige bexoram beya: behesh neshun bede begu felfel xaridim be masoud begu beya:d tu.  
 \*SHA: masoud beya: tu.

- %mor: vocmasoud be-vimplya: advltu.  
 %syn: <Vimp A>.  
 \*SHA: beya: tu.  
 %mor: be-vlya: advltu.  
 %syn: <Vimp A>.  
 \*SHA: boxolim.  
 %mor: bo-vlxor&pres-INFlim&1p.  
 %syn: <VI>.  
 \*SHA: ina:.  
 %mor: prolin-lla:.  
 %syn: <Pron>.  
 \*SHA: ina: ro.  
 %mor: prolin-lla: omarkerlo.  
 %syn: elliptical  
 \*SHA: ina:.  
 \*MOT: muha:to shunc bekonam.  
 \*SHA: na.  
 \*MOT: ke qashang beshi.  
 \*SHA: ino mexa:m.  
 %mor: prolin-omarkerlo mi-vlx&pres-INFlam&1s.  
 %syn: <O VI>.  
 \*MOT: na na ba: changa:l nemishe ba:yad chi beya:ri eh eh mixa:y che ka:resh  
 koni a:x mixa:y che ka:resh koni?  
 \*SHA: ka:t bedin.  
 %mor: nlka:rd be-vimplyd-INFlin&2p.  
 %syn: <O Vimp>.  
 \*SHA: bedin ma.  
 %mor: be-vimplyd-INFlin&2p objprolma&1s.  
 %syn: <Vimp I O>.  
 \*DAD: balae.  
 \*SHA: bedin.  
 %mor: be-vimplyd-INFlin&2p.  
 %syn: <Vimp>.  
 \*SHA: bedin.  
 repetition.  
 \*MOT: begu ba:ba: neanda:zin bade masoud seda:sh kon begu masoud koja: budi  
 busesh kon.  
 \*SHA: mashoud.  
 %mor: nlmasoud.  
 %syn: N.  
 \*MOT: na azash bepors koja: budi dars xundi madrese rafti azesh bepors.  
 \*SHA: das xundi ha:n.  
 %mor: nldars vlxund&past-INFlin&2s.  
 %syn: <CompVI>.  
 \*MOT: madrese marziyere didi?  
 \*SHA: didi ha:n?  
 %mor: vldid&past-INFlin&2s?  
 %syn: <VI>.  
 \*SHA: ma:mi didi ha:n?  
 \*MOT: sheytuni nakardi?  
 \*SHA: setuni nakardi?  
 repetition.  
 \*MOT: ki portoqa:l mixa:d?  
 \*SHA: ma.  
 %mor: prolma&1s.

- %syn: <Pron>.  
 \*MOT: na be sharza:d nemidim.  
 \*SHA: ma.  
 %mor: prolma&1s.  
 %syn: <Pron>.  
 \*MOT: nada:ram.  
 \*SHA: ma.  
 %mor: prolma&1s.  
 %syn: <Pron>.  
 \*MOT: xob be masoudam bedam.  
 \*SHA: yeki.  
 %mor: nlyek-defli.  
 %syn: [ND].  
 \*MOT: yeki ba:shi be ma:ma:nam bedam?  
 \*MOT: behesh begu nemidam nada:rim.  
 \*SHA: nada:lim.  
 repetition.  
 \*MOT: tamum mishe.  
 \*SHA: tamum mishe.  
 repetition.  
 \*SHA: ma:ma:n seven bede.  
 %mor: nlseven be-vimplde.  
 %syn: <O Vimp>.  
 \*SHA: bede be man.  
 %mor: be-vimplde preplbe prolman&1s.  
 %syn: <Vimp A>.  
 \*MOT: masoudo seda:sh kon begu ye boshqa:b beya:re.  
 \*SHA: beya:.  
 %mor: be-vimplya:.  
 %syn: <Vimp>.  
 \*SHA: masoud beya:r bosqa:.  
 %mor: be-vimplya:r nlbosqa:b.  
 %syn: <Vimp O>.  
 \*MOT: esme in chiye boland esme in chiye boland begu.  
 \*MOT: sharhrza:d to madrese ba: marziye ba:zi kardi ha:?  
 \*SHA: man am boxolam.  
 %mor: prolman&1s advlam bo-vlxor&pres-INFlam&1s.  
 %syn: <S A VI>.  
 \*SHA: man am.  
 %mor: prolman&1s advlham.  
 %syn: [ X A].  
 \*MOT: to mixa:y che ka:r koni?  
 \*SHA: bexolam.  
 %mor: be-vlxor&pres-INFlam&1s.  
 %syn: <VI>.  
 \*MOT: das nazan man be to nemidam.  
 \*SHA: bexolam.  
 %mor: be-vlxor&pres-INFlam&1s.  
 %syn: <VI>.  
 \*MOT: ina: ina: male ma:ma:ne.  
 \*SHA: ma:ma:n man am.  
 %mor: vocman|1s advlham.  
 %syn: [ X A].  
 \*MOT: to ham mixa:y?  
 \*SHA: ha:n.

- \*MOT: ka:rdesh xub nist begu ba:ba: ye ka:rd tond bede nemibore hamesh a:b  
ofta:d.
- \*SHA: bede man.  
%mor: be-vimplde prolman&1s.  
%syn: <Vimp O>.
- \*SHA: bede man.  
repetition.
- \*MOT: sabr kon ta: pustesh bekonam.  
\*SHA: na.
- \*MOT: bexor bebin xoshmaze bexor hum xoshmaze sharza:d be masoud begu man  
emruz raftam madrese.  
\*SHA: man am raftamha: madese.  
%mor: prolman&1s advlham vltraft&past-INFlam&1s advlmadrese.  
%syn: <S A VI A>.
- \*MOT: beshesh begu koja: rafte azash bepors koja: rafte masoud?  
\*SHA: ma ratam.  
%mor: prolman&1s vltraft&past-INFlam&1s.  
%syn: <S VI>.
- \*MOT: behesh begu che ka:r kardi emruz?  
\*BRA: che ka:r kardi?  
\*SHA: do ta:mun madese.  
ambiguous.
- \*BRA: ha:n?  
\*SHA: madese.  
%mor: nlmadrese.  
%syn: N.
- \*MOT: ba: ki ba:zi kardi?  
\*SHA: ba: badish rafta adese.  
ambiguous.
- \*MOT: ki toro bord madrese?  
\*SHA: ba:ba:.  
%mor: nlba:ba:.
- \*MOT: ba:ba: chi pushid chi pushidi?  
\*SHA: java:b.  
%mor: nljura:b.
- \*MOT: jura:b dige chi pushidi koteto pushidi kotet?  
\*SHA: koteto napusham.  
%mor: nlkoteto neg na-vlpush&pres-INFlam&1s.  
%syn: <O VI>.
- error in agreement.
- \*MOT: napushidi qaza: xordi shir xordi?  
\*SHA: ino bebin.  
%mor: prolin&omarkerlo be-vimplbin.  
%syn: <O Vimp>.
- \*MOT: ha:n ki deshide?  
\*BRA: begu ma begu ma.  
\*SHA: ma.  
repetition.
- \*MOT: na ki keshide ino.  
\*SHA: ma.  
%mor: prolma.  
\*SHA: mashoud.  
\*SHA: beya:.  
%mor: be-vimplya:.  
%syn: <Vimp>.

- \*MOT: sharzad migam rafti madrese fa:teme omad inja: ha:  
 \*SHA: shaza:d.  
 %mor: n|shahrza:d.  
 %syn: N.  
 \*SHA: shaza:d.  
 repetition.
- \*MOT: mixa:st ba: shahrza:d ba:zi kone to nabudi koja: budi?  
 \*SHA: ma raftam madese.  
 %mor: prolman&1s v|raft&past-INFlam&1s adv|madrese.  
 %syn: <S VI A>.
- \*MOT: unvaqt fa:teme omad to che ka:r kardi goftam sharza:d nist rafte madese.  
 \*SHA: ha:n.  
 \*MOT: fa:teme tanha: shod ha:la: be fa:teme chi migi?  
 \*SHA: shah madese badan.  
 %mor: n|shahrza:d adv|madrese adv|badan.  
 %syn: <S A A>.
- \*MOT: behesh migi badan.  
 \*SHA: poqo bedemapoqo.  
 %mor: n|portoqa:l be-vimplde prolma&1s.  
 %syn: <O Vimp O>.
- \*MOT: eh nemidam.  
 \*SHA: bede.  
 %mor: be-vimplde.  
 %syn: <Vimp>.
- \*SHA: boxolam.  
 %mor: bo-v|xor&pres-INFlam&1s.  
 %syn: <VI>.
- \*MOT: porteqa:l bexori?  
 \*SHA: bexoram.  
 %mor: bo-v|xor&pres-INFlam&1s.  
 %syn: <VI>.
- \*SHA: bede.  
 %mor: be-vimplde.  
 %syn: <Vimp>.
- \*MOT: shahrza:d mahasa: ham omadesh ha: goft shahrza:d koush.  
 \*SHA: ma bede.  
 %mor: prolma&1s be-vimplde.  
 %syn: <O Vimp>.
- \*MOT: be masoudam begu pa: kone dasto danesh.  
 \*SHA: ma: bedesh.  
 %mor: prolma&1s be-vimplde-INFlesh&3s\_o.  
 %syn: <O Vimp O>.
- \*MOT: chi bedam.  
 \*SHA: bede.  
 %mor: be-vimplde.  
 %syn: <Vimp>.
- \*SHA: bede man.  
 %mor: be-vimplde prolman&1s.  
 %syn: <Vimp O>.
- \*MOT: masoud ja:n azash bepors koja: budi shahrza:d shoma: to madrese che ka:r kardi?  
 \*SHA: man am raftam.  
 %mor: prolman&1s adv|ham v|raft&past-INFlam&1s.  
 %syn: <S A VI>.
- \*MOT: ha:n?

- \*SHA: raftam.  
 %mor: v|raft&past-INFlam&1s.  
 %syn: <VI>.  
 \*MOT: sharza:d sharza:d be masoud begu jura:beto bekan pa:t kasife.  
 \*SHA: bekan.  
 %mor: be-vimplkan.  
 %syn: <Vimp>.  
 \*SHA: bekanesh dige.  
 %mor: be-vimplkan-INFlesh&3s\_o advldige.  
 %syn: <VimpIo A>.  
 \*MOT: az ba:ba:t bepors koja: mixa:yn berin?  
 \*SHA: ba:ba:koja:?  
 %mor: q|koja:.  
 %syn: Q.  
 \*SHA: madse?  
 %mor: advlmadrese.  
 %syn: A.  
 \*SHA: bolo bele madese madesaro ambiguous.  
 \*SHA: bolo.  
 %mor: bo-vimplro.  
 %syn: <Vimp>.  
 \*MOT: begu man nemiya:m inja: va:y mistam.  
 \*SHA: ba:ba: niya: man.  
 %mor: vocba:ba:negni-v|y&pres-INFla:m prolman&1s.  
 %syn: <VI S>.  
 \*DAD: masoud nakon.  
 \*MOT: nazan.  
 \*SHA: nazan.  
 %mor: neglha vimplzan.  
 %syn: <Vimp>.  
 \*MOT: begu age man beya:m ma:ma: tanha: mishe.  
 \*SHA: age ma:ama:no benda:ze ambiguous.  
 \*SHA: ageboro madesexob.  
 %mor: bo-vlro n|madrese minor.  
 %syn: <Vimp A>.  
 \*SHA: baba:y.  
 minor.  
 \*MOT: xoda:ha:fez besheshun begu ta: beran begu xoda: ha:fez.  
 \*SHA: xoa:.  
 \*MOT: bolan.  
 \*SHA: xoa:.  
 \*DAD: xoda:ha:fez miya:y madrese.  
 \*SHA: na.  
 \*DAD: dusi?  
 \*SHA: mishinam ma:man.  
 %mor: mi-vlshin&pres-INFlam&1s n|ma:ma:n.  
 %syn: <VI O>.  
 \*DAD: xob.  
 \*SHA: manman.  
 %mor: prolman&1s.  
 %syn: 'pro'.  
 \*MOT: eh in chiye shahrza:d.  
 \*SHA: pul.  
 %mor: n|pul.  
 %syn: N.

\*MOT: in pulo koja: beberim berim ba:sh chi bexarim ha:n?  
 \*SHA: ma:ma:n ma:ma:n ma:ma:ni.  
 \*MOT: ina:r bexun ina:r kiyān in kiye in kiye ha:n?  
 \*SHA: beshin.  
 %mor: be-vimplshin.  
 %syn: <Vimp>.  
 \*SHA: beshin.  
 %mor: be-vimplshin.  
 %syn: <Vimp>.  
 \*SHA: beshin.  
 repetition.  
 \*MOT: beya: masoud in male to masoud mixa:d bexune.  
 \*SHA: na.  
 \*MOT: pas ki bexune.  
 \*SHA: mane.  
 %mor: possprolman-cople&pres\_3s.  
 %syn: <C(V)>.  
 \*MOT: na male masoude.  
 \*SHA: kush?  
 %mor: qlku-INF\sh&3s\_o?  
 %syn: <QX>?  
 \*SHA: kush?  
 repetition.  
 \*MOT: kush ma:ma:n koja: anda:xti doba:re masoud ortoqa:l ki mixa:d bexore?  
 \*SHA: man am bexoulam.  
 %mor: prolman&1s advlham be-v\xor&pres-INF\am&1s.  
 %syn: <S A VI>.  
 \*MOT: dige nemixa:d base.  
 \*SHA: man am bexulam  
 %mor: prolman&1s advlham be-v\xor&pres-INF\am&1s.  
 %syn: <S A VI>.  
 @End.

@Begin  
 @Participants: MAH Mahdi Child, DAD Father, GOL Mother  
 @Date: 21-FEB-93  
 @Age of MAH: 2;2  
 @Filename: MAHDI. CHA  
 @Situation: free talks in living room

\*MAH: ba:ba: gelef kan.  
 \*MAH: gelf.  
 %mor: vlgerft&3s\_past.  
 %syn: V.  
 \*MAH: man dasdas.  
 %mor: prolman&1s nldast&s.  
 %syn: [Pron N].  
 \*MAH: das das.  
 \*MAH: dus dus.  
 \*MAH: ba:ba: da did did did.  
 \*MAH: ba:ba: ma:hi xxx.  
 %mor: nlma:hi&s xxx.  
 %syn: VOC S X.  
 \*MAH: bib pib.  
 \*GOL: boro pa:ein beshin.  
 \*MAH na pa:ein sade.  
 %mor: neglna advlpa:ein adjlsard-cople&3s\_pres.  
 %syn: MINOR A C(V).  
 \*GOL: chera: sarde?  
 \*MAH: na sade.  
 %mor: neglna adjlsard-cople&3s\_pres.  
 %syn: MINOR C(V).  
 \*GOL: xob bara: chi?  
 \*MAH: sarde.  
 %mor: adjlsard-cople&3s-pres.  
 %syn: C(V).  
 \*GOL: mahdi  
 \*MAH: bale.  
 \*GOL: boro unja:.  
 \*GOL: ja: hast beshin  
 \*MAH sade  
 %mor: adjlsard-cople&3s-pres.  
 %syn: C(V).  
 \*GOL: chera: sarde?  
 \*MAH: ham.MINOR.  
 \*GOL: beya: berim bexa:bim  
 \*MAH: na.MINOR.  
 \*GOL: chera:?  
 \*MAH: hanto.  
 %mor: advlhamintor.  
 %syn: A.  
 \*GOL: chi?  
 \*MAH: sade.  
 \*GOL: bara: chi sarde?  
 \*MAH: sade.  
 %mor: adjlsard-cople&3s\_pres.  
 %syn: C(V).

- \*MAH: ta:q mane.  
 %mor: nlota:q&s poss pro|man&1s-cople&3s\_pres.  
 %syn: C(V).  
 [N Pron].
- \*GOL: kodum ota:qe toe.  
 \*MAH: ota:q in.  
 %mor: nlota:q&s detlin.  
 %syn: [Det N].
- \*MAH: ma:ni ma:shi.  
 %mor: nlma:shin&s.  
 %syn: VOC N.
- \*GOL: mahdi da:da:shi ku?  
 \*MAH: da:da:shi.  
 %mor: nlda:da:shi&s.  
 %syn: N.
- \*GOL: daldalshi che ka:r dard?  
 \*MAH: eh ba:ba: xxx.  
 \*MAH: da:da: la:la: kade.  
 %mor: nlda:da:&s nlla:la: v|kard-e&aux\_presperf\_3s.  
 %syn: S Comp V. [N V].
- \*MAH: aou das.  
 MAH: aou.  
 \*MAH: aou das.
- \*GOL: na bede ma xodka:r bede ma.  
 \*GOL: xodka:r ma:le mane.  
 \*MAH: da.  
 \*GOL: bede man ma:le mane.  
 \*MAH: in toa:r man .  
 %mor: detlin nlxodka:r&s man|posspro&1s.  
 %syn: S C.  
 [Det N N].
- \*GOL: xodka:r ma:le mane.  
 \*MAH: dale ma: ma.  
 %mor: nldar&s-elposs ma:l|poss pro|ma&1s.  
 %syn: N ma:l Pron.
- \*MAH: man.  
 \*GOL: beya: begiresh.  
 \*MAH: bede.  
 %mor: be-vimplde&2s.  
 %syn: Vimp.
- \*MAH: bede.  
 %mor: be-vimplde&2s.  
 %syn: Vimp.
- \*MAH: da:da: la:la: kade.  
 %mor: nlda:da:&s nlla:la: v|kard-e&aux\_presperf\_3s.  
 %syn: S Comp V.  
 [N V].
- \*GOL: koja: la:la: kard?  
 \*MAH: un in (playing).  
 \*GOL: mahdi ramin ku?  
 \*MAH: une.  
 %mor: nlxune&s.  
 %syn: A.
- \*GOL: ra:min ku  
 \*MAH: gi?

- %mor: Qlchi.  
 %syn: Q.  
 \*MAH: une.  
 %mor: nlxune&s.  
 %syn: A.  
 \*GOL: kodum xone?  
 \*MAH: une.  
 \*GOL: koja:  
 \*MAH: (playing).  
 \*GOL: mahdi ha:n?  
 \*MAH: une.  
 \*GOL: ha:pu ku?  
 \*MAH: a:pu oune.  
 %mor: nlha:pu&s nlxune&s.  
 %syn: <X A>.  
 \*GOL: ha:pu xune nadare.  
 \*MAH: une.  
 %mor: nlxune&s.  
 %syn: A.  
 \*GOL: koja:  
 \*MAH: une.  
 %mor: nlxune&s.  
 %syn: A.  
 \*GOL: ba:ba:t ku?  
 \*MAH: ba:ba: une.  
 %mor: nlba:ba:&s nlxune&s.  
 %syn: X A.  
 \*GOL: koja:.  
 \*MAH: une.  
 \*GOL: ba:ba:t ku?  
 \*MAH: xune.  
 \*MAH: in in.  
 \*GOL: in chiye?  
 \*MAH: in bese. 5 times.  
 \*MAH: in ma:ma: repetition  
 \*MAH: in bese.  
 \*DAD: man a:qa:  
 \*MAH: na bibibiye.  
 %mor: neglna nlbibi&s-coplye&3s\_pres.  
 %syn: MINOR C(V).  
 \*MAH: in bibi.  
 %mor: prolin bibiln&s.  
 %syn: D N.  
 \*DAD: mamad boy.  
 \*MAH: in axe.  
 %mor: prolin adjlax-cople&3s\_pres.  
 %syn: S C(V).  
 \*DAD: mamad boy.  
 \*MAH: in in.  
 \*DAD: man alqal ti babi.[laughing].  
 \*DAD: to baby.  
 \*MAH: na.  
 \*DAD: che ra:.  
 \*MAH: in beshe. repet (5 times)  
 \*DAD: to beibi.

- \*MAH: in beshe. repet(5 times)  
 \*DAD: man ba:ba.  
 \*MAH: in beshe. repet.  
 \*MAH: in na.  
 %mor: prol in neg|na.  
 %syn: <X NEG>.  
 \*MAH: in beshe.  
 %mor: prolin be-V|sh&pres-e&3s\_pres  
 %syn: S VI.  
 \*MAH: inin axe.  
 %mor: prolin adj|ax-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: in ma:ma:.  
 %mor: detlin n|ma:ma:&s.  
 %syn: D N.  
 \*MAH: in in in. Repet  
 \*DAD: in ma:le man.  
 \*MAH: in ma:ma:.  
 %mor: detlin n|ma:ma:&s.  
 %syn: D N.  
 \*MAH: da:da:shi beshe.  
 %mor: n|da:dashi be-v|sh&pres-e& 3s\_pres.  
 %syn: S VI.  
 \*MAH: asan beshe.  
 %mor: adv|aslan be -v|sh&pres-e& 3s\_pres.  
 %syn: A X.  
 \*MAH: in na na.  
 %mor: prolin neg|na neg|na.  
 %syn: X NEG.  
 \*MAH: in axe.  
 %mor: prolin adj|ax-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: asanasan beshe da:da:shi.  
 %mor: adv|aslan be-v|sh&pres-INF|e& 3s\_pres n|da:da:shi&s.  
 %syn: <REP A VI S>.  
 \*MAH: in dale.  
 %mor: prolin n|dar-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: in ma:ma:n.  
 %mor: detlin n|ma:ma:n&s.  
 %syn: D N.  
 \*MAH: in ma:ma:n.  
 %mor: detlin n|ma:ma:n&s.  
 %syn: D N.  
 \*GOL: mahdi amu ya:ser ku.  
 \*MAH: ba:la:  
 %mor; adv|ba:la:.  
 \*GOL: koja: ba:la:  
 \*GOL: amu ku?  
 \*MAH: uneune.  
 \*MAH: bad une une.  
 \*MAH: bad asan.  
 \*MAH: in xx zad.  
 %mor: prolin V|zad&3s\_past.  
 %syn: S V.

- \*MAH: na in axe.  
 %mor: neglna prolin adjlax-cople&3s\_pres.  
 %syn: MINOR S C(V).  
 \*MAH: in beshe.  
 %mor: prolin be-Vlsh&pres- INFle&3s\_pres.  
 %syn: S VI.  
 \*MAH: xune did na.  
 %mor: nlxune nldid neglna.  
 %syn: X Y NEG.  
 \*MAH: una nist did did.  
 %mor: prolun-plla neglni-coplst&pres\_3s nldid did.  
 %syn: S V C.  
 \*GOL: mamad ku?  
 \*MAH: une.  
 %mor: nlune&s.  
 \*MAH: la:la: kade.  
 %mor: nlla:la: vlkard-INFle&aux\_presperf\_3s.  
 %syn: Comp V.  
 [N V].  
 \*GOL: koja: la:la: karde?  
 \*MAH: asan.  
 %mor: advlaslan.  
 %syn: 'A'.  
 \*GOL: ha:n koja:?  
 \*MAH: une  
 \*GOL: koja:ye xune?  
 \*MAH: na.  
 \*GOL: koja:  
 \*MAH: pa:eine.  
 %mor: advlpa:ein-cople&3s\_pres.  
 %syn: C(V).  
 \*GOL: sarde.  
 \*MAH: be sade.  
 %mor: adjlsard-cople&3s\_pres.  
 %syn: C(V).  
 \*GOL: da:da:shi ku?  
 \*MAH: da:da:shi man.  
 %mor: nlda:da:shi&s pronlman&1s.  
 %syn: S O.  
 \*GOL: ku koja:e?  
 \*MAH: une.  
 %mor: nlune.  
 \*DAD: ra:ket ma:le mamade.  
 \*MAH: mamad.  
 %mor: nlmamad.  
 \*MAH: in na.  
 %mor: pronlin neglna.  
 %syn: X neg.  
 \*MAH: in na.  
 %mor: prolin neglna.  
 %syn: X neg.  
 \*MAH: didi didi.  
 %mor: nldidi didi.  
 %syn: N.  
 \*MAH: inin.

- %mor: pronlin.  
 %syn: 'Pron'.  
 \*MAH: in axe.  
 %mor: pronlin adjlax-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: in dididi.  
 \*mor: pronlin nldidi.  
 %syn: DET N.  
 %MAH: beya:.  
 %mor: be-vimplya&2s\_pres.  
 %syn: Vimp.  
 \*MAH: beya:.  
 %mor: be-vlya&2s\_pres.  
 %syn: Vimp.  
 \*MAH: beya:.  
 %mor: be-vlya&2s\_pres.  
 %syn: Vimp.  
 \*MAH: in dididdid.  
 %mor: prolin nldidi.  
 %syn: DET N.  
 \*MAH: ma:ma: gef? ali ali.  
 \*GOL: in kiye?  
 \*MAH: in ine.  
 %mor: prolin pronlin-cople&3s\_pres.  
 %syn: S C(V).  
 \*GOL: ha:la: boro bexa:b.  
 \*GOL: ha:la: boro  
 \*MAH: na. MINOR  
 \*MAH: in ma:ma:n kade.  
 %mor: prolin nlma:man&s vlkard-e&aux\_presperf\_3s.  
 %syn: O S V.  
 \*DAD: da:da:shi xara:b kard.  
 \*MAH: ma:ma:n xa a:b kad.  
 %mor: nl ma:ma:n adjlaxarab vlkard&3s\_past.  
 %syn: <S CompV>.  
 [Adj V].  
 \*DAD: chera:  
 \*MAH: ma:ma:nam kad.  
 %mor: nl ma:ma:n vlkard&3s\_past.  
 %syn: <S V>.  
 \*DAD: chera:?  
 \*MAH: da:da: xaa:bi xaa:b kad  
 %mor: nlda:da: adjlaxarab vlkard&3s\_past.  
 %syn: S Comp V.  
 [Adj V].  
 \*DAD: in yeki xara:b ka:rya:ye in yeki ye.  
 \*MAH: in [1 syllable].  
 \*MAH: i in in in.  
 \*MAH: inin zad.  
 %mor: prolin vlzad&3s\_past.  
 %syn: <S V>.  
 \*MAH: didi in in?  
 %mor: vldid-INFli&2s\_past prolin?  
 %syn: VI S.  
 \*DAD: are didam.

- \*MAH: didi inin?  
 %mor: vldid-i&2s\_past prolin.  
 %syn: <VI S>.  
 \*DAD: ki kard?  
 \*MAH: in in in in in. repetition  
 \*MAH: didi?  
 %mor: vldid-INFli&2s\_past?  
 %syn: VI?  
 \*DAD: a:h a:h.  
 \*MAH: a:le.  
 \*MAH: in in in kad ma:ma:n.  
 %mor: prolin vlkard&3s\_past nlma:ma:n.  
 %syn: O V S. ambiguous.  
 \*MAH: in in in in xxx.  
 \*MAH: in kiye?  
 %mor: prolin qlki-coplye&3s\_pres.  
 %syn: S QCV?  
 \*MAH: ma:niye?  
 %mor: nlma:ni-coplye&3s\_pres.  
 %syn: C(V).  
 \*MAH: doz doz.  
 \*MAH: ma:ma: nist.  
 %mor: nlma:ma: neglni-coplst&3s-pres.  
 %syn: S V.  
 \*MAH: nist.  
 %mor: neglni-coplst&3s-pres.  
 %syn: NegV.  
 \*MAH: ma:ma:n tab kab kab  
 \*MAH: ba:ba: gab  
 \*MAH: ba:ba: dash kad a:re.  
 %mor: nlba:ba: nldast vlkard&3s\_past minor.  
 %syn: S Comp V minor. [N V].  
 \*MAH: da da.  
 \*MAH: das.  
 \*DAD: uno xara:b kard.  
 \*MAH: ba:ba:.  
 \*GOL: ino ki xara:b kard?  
 \*MAH: in.  
 \*GOL: da:da:shi che ka:r kard?  
 \*MAH: in.  
 \*GOL: da:da:shi ino che ka:r kard?  
 \*GOL: da:da:shi che ka:r kard?  
 \*GOL: doz che ka:r kard?  
 \*MAH: in ma:ni xxx.  
 \*MAH: dosh ma:ni.  
 \*GOL: ha:n?  
 \*MAH: ma:ma: das xxx.  
 \*MAH: doz.  
 \*MAH. in xaa:b kad  
 %mor: pronin adjlxara:b vlkard&3s\_past.  
 %syn: S CompV.  
 [ADJ N].  
 \*GOL: kifet ku?  
 \*MAH: to xune.  
 %mor: preplto advlxune

- %syn: A.  
 Pr N: AP  
 \*GOL: koja:?  
 \*MAH: xune.  
 %mor: nlxune.  
 \*GOL: kodum ota:q?  
 \*MAH: ota:q. REPET  
 \*GOL: ha:n?  
 \*MAH: nist.  
 %mor: neglni-coplst&3s\_pres.  
 %syn: <V>.  
 \*DAD: boro beya:r.  
 \*DAD: boro kefeto beya:r.  
 \*MAH: kif.  
 \*MAH: ma:ma: i axe.  
 %mor: voclma:ma: prolin adjlax-cople&3s\_pres.  
 %syn: VOC S C(V).  
 \*MAH: in axe.  
 %mor: prolin adjlax-cople&3s\_pres.  
 %syn: VOC S C(V).  
 \*MAH: ba:ba: inin axe.  
 %mor: voclba:ba: prolin adjlax-cople&3s\_pres.  
 %syn: VOC S C(V).  
 \*DAD: chera:? axe?  
 \*MAH: in in in in.  
 \*MAH: in in in.  
 \*GOL: in chi shod?  
 \*MAH: in in in.  
 \*GOL: in chiye?  
 \*MAH: das.  
 %mor: nldas.  
 \*MAH: ba:ba: na:zxx.  
 \*MAH: in dale.  
 %mor: prolin darln-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: inin axe.  
 %mor: prolin adjlax-cople&3s\_pres.  
 %syn: S C(V).  
 \*MAH: ba:ba: ma:ma:.  
 \*DAD: boland qese begu.  
 MAH: na.  
 \*DAD: yeki?  
 \*MAH: na.  
 \*MAH: qase.  
 \*MAH: ba:ba: in axe.  
 %mor: voclba:ba: prolin adjlax-cople&3s-pres.  
 %syn: VOC S C(V).  
 \*MAH: in axe.  
 %mor: prolin adjlax-cople&3s-pres.  
 %syn: S C(V).  
 \*MAH: in sat axe.  
 %mor: detlin nlsat adjlax-cople&3s-pres.  
 %syn: S C(V).  
 [DN:NP].  
 \*MAH: axe.

- %mor: adjlax-cople&3s-pres.  
 %syn: <CV>.  
 \*DAD: i sa:eto xara:b mikni ha:n.  
 \*MAH: sat ma:ma:n.  
 %mor: nlsa:at&s nlma:ma:n&s  
 %syn: [N N].  
 \*DAD: sa:ate ba:ba:e.  
 MAH: sat ma:ma:n.  
 %mor: nlsa:at&s nlma:ma:n&s.  
 %syn: [N N].  
 \*DAD: na sa:at male ba:ba:e.  
 \*MAH: basaat ma:ma:niye.  
 %mor: nlsa:at&s nlma:ma:n&s-coplye&3s\_pres.  
 %syn: S C(V).  
 \*DAD: sa:at male ba:ba:e.  
 \*MAH: na ma:ma:n.  
 %mor: neglna nlma:ma:n.  
 %syn: Minor N.  
 \*DAD: ma:ma:n sa:at nada:re.  
 \*MAH: mahdi.  
 %mor: nlmahdi.  
 \*DAD: mahdi na.  
 \*MAH: ema:.  
 %mor: nlema:.  
 %syn: 'N'.  
 \*DAD: mahdi kocholu-e sa:at nada:re.  
 \*MAH: na.  
 \*MAH: dose ax.(pause).  
 \*MAH: a:h.  
 \*MAH: a:h.  
 \*MAH: ba:ba:  
 \*DAD: sa:at chande?  
 \*MAH: na mmamad sa:at.  
 %mor: neglna Nlmamad sa:atln&s.  
 %syn: [Minor N N].  
 %err: mamad sa:at = sa:at-e mamad.  
 \*MAH: mamad  
 %mor: nlmamad.  
 %syn: N.  
 \*DAD: mamad koja:st?  
 \*DAD: mamad nist  
 \*DAD: mamad hapu xord.  
 \*DAD: mahdi ha:pu xord.  
 \*MAH: na da:da:.  
 %mor: neglna nlda:da:.  
 %syn: NEG X .  
 \*DAD: mahdi ku mahi?  
 \*MAH: a:le.  
 %mor: n|xa:le.  
 \*MAH: a:le ku?  
 %mor: n|xa:le WHQ|ku?  
 %syn: X Q?  
 \*MAH: a:le.  
 \*DAD: xa:le ki?  
 \*MAH: a:le.

\*DAD: kodum xa:le?  
 \*MAH: xa:le ku?  
 %mor: n|xa:le WHQ|ku?  
 %syn: <X Q>?  
 \*DAD: nist.  
 \*MAH: nist?  
 %mor: neg|ni-coplst&1s\_pres.  
 %syn: <NegV>.  
 \*DAD: na.  
 \*MAH: mamade?  
 %mor: N|mamad-cople&3s\_pres?  
 %syn: SV?  
 \*DAD: a:re.  
 \*DAD: ha:pu xord ha:pu.  
 \*MAH: ha:pu nost?  
 \*DAD: a:re.  
 \*MAH: ba:ba: axe sa:at[\*].  
 %mor: voclba:ba: adjlax-cople&3s\_pres n|sa:at&sg.  
 %syn: VOC C(V) S>.  
 %err: CVS = SCV  
 \*MAH: in in in in beshkide.  
 \*MAH: ine ine.  
 \*DAD: na in na.  
 %mor: neg prolin neg|na.  
 %syn: MINOR X NEG.  
 \*MAH: ba:ba: ese bogu.  
 %mor: voclba:ba: n|qese be-v|gu&2s\_pres.  
 %syn: VOC O V.  
 \*DAD: to begu.  
 \*DAD: to qese begu.  
 \*DAD: amin koja: raft?  
 \*MAH: ba:ba: zat neishe.  
 %mor: voclba:ba: n|zat neg|ne-mi-v|sh&prespass-3sle.  
 %syn: VOC CompVI.  
     [N VI].  
 \*MAH: axe do axe.  
 \*MAH: zat axe.  
 %mor: n|zabt adjlax-cople&pres\_3s.  
 %syn: <S C(V)>.  
 \*MAH: la:la:.  
 %mor: n|la:la:.  
 %syn: N.  
 @End.

ambiguous

@Begin

@Participants: FAA Faeze Child, DAD Father, BRA Brother.

@Date: 11- Feb- 93

@Age of FAA: 2;4

@Filename: FAEZE. CHA

@Situation: Free play

\*FAA: kodum?  
 %mor: q adv\kodum  
 %syn: WHQ.  
 \*DAD: in?  
 \*FAA: ami daeid.  
 %mor: n\amir saeid  
 %syn: N  
 \*DAD: saeid? in kiye?  
 \*FAA: ki?  
 %mor: q o\ki  
 %syn: WHQ  
 \*FAA: beda:d.  
 %mor: n\behza:d  
 %syn: N  
 \*DAD: behza:d. behzad;o dustesh da:ri?  
 \*FAA: ma balad nistam.  
 %mor: pron\man&1s n\balad neg\ni-cop\st&pres-1s\am.  
 %syn: <S C VI>.  
 pause  
 \*FAA: a:re.  
 \*DAD: xob in kiye?  
 \*FAA: mixune i?  
 %mor: mi-v\xun&pres-e\3s pron\in?  
 %syn: <VI S>?  
 \*DAD: a:re  
 \*FAA: momina:  
 \*DAD: mobina:  
 \*FAA: na.  
 \*DAD: mobina a:bjiye kiye? in kiye?  
 \*FAA: da:da:sh amil hosein.  
 %mor: n\da:da:sh compn\amir hossein.  
 %syn: N N.  
 \*DAD: in kiye?  
 \*FAA: ya ya:  
 \*DAD: laya. ki?  
 \*FAA: ya ya:  
 \*DAD: barkala: ha:la: da:da:shesh mishe azash bexa:y abc ro bara:t bexune.  
 \*FAA: xun miya:d.  
 %mor: n\xun mi-v\y&pres-ad\3s  
 %syn: <CompVI>.  
 [N VI].  
 \*DAD: pa:t xun miya:d. chi shode pa:t?  
 \*FAA: xun miya:d.  
 %mor: n\xun mi-v\y&pres-ad\3s  
 %syn: <CompVI>.  
 [N VI].  
 \*DAD: chi shod pa:t xun miya:d?  
 \*FAA: suza tamu.

- \*DAD: misuze?  
 \*FAA: a:re.  
 \*DAD: xub mishe. da:da:shesh behesh begu abc ro bexun.  
 \*BRA: faeze abc ro bexun.  
 \*FAA: balad nistamesh.  
 %mor: n\balad neg\ni-cop\st&pres-1s\lam-3s\esh.  
 %syn: <CompVIIsIo>.  
 [N VI].  
 \*FAA: a:at shish baladam.  
 \*DAD: balad nisti? sa:at shishi baladi?  
 \*FAA: a:re. minor  
 \*DAD: xob ye ba:r bara: man bexun.  
 \*FAA: da:eidam migam.  
 %mor: v\xa:biddam & past-1s\lam pres\mi-v\g-1s\lam.  
 %syn: <V V>  
 \*DAD: xa:bidi migi?  
 \*FAA: na naxa:bidam.  
 %mor: neg\social minor neg\na-v\xa:bid-am\past-1s\lam.  
 %syn: <VI>.  
 \*DAD: naxa:bidi ha:n?  
 \*FAA: na  
 \*DAD: ha:la: ye ba:r saie kon be ba:ba: begu. mexa: qeichi ro bedam  
 beshini ka:r dasti dorost koni?  
 \*FAA: na aval bexun.  
 %mor: na\neg social minor adv\aval be-v\xun.  
 %syn: minor A Vimp.  
 \*DAD: shoma: bexun.  
 \*FAA: ino bara:m bexun.  
 %mor: pro\in&obj\o prep\bara:-m\1stsg be-v\xun.  
 %syn: O A Vimp  
 \*DAD: ino mixunam shoma: bexun.  
 \*FAA: kodumo?  
 %mor: Q \kodum object marker\o.  
 %syn: QX.  
 \*DAD: abc ro aval bexun.  
 \*FAA: anuz naxa:bidam.  
 %mor: adv\hanuz neg\na-v\xa:bid&past-1s\lam.  
 %syn: <A VI>.  
 \*DAD: hanuz naxa:bidi?  
 \*FAA: na.  
 \*DAD: xeil xob man ino doros mikonam bexun ha:la:.  
 \*FAA: ala:n naxabidam.  
 %mor: adv\ala:n neg\na -v\xa:bid&past-1s\lam.  
 %syn: <A VI>.  
 \*DAD: ala:n naxa:bidi?  
 \*FAA: na.  
 \*DAD: xob age naxuni manam nemitunam bara:t qese bexunam shoma:  
 bexun.  
 \*FAA: naxa:bidam.  
 %mor: neg\na- v\xa:bid&past-1s\lam.  
 %syn: VI.  
 \*DAD: xob ye ba:r yeba:r beya: ba: ham dige bexunim.  
 \*FAA: naxa: naxa:bidam.  
 %mor: neg\na- v\xa:bid&past-1s\lam.  
 %syn: VI.

- \*FAA: chi ala: bexunam?  
 %mor: q\chi adv\ala:n be-v\xun-1s\lam  
 %syn: <QO AVI>.
- \*DAD: xob chi ro baladi bexuni?  
 \*FAA: eh ino baladam.  
 %mor: pro\in-omarker\o n\balad-1s\lam.  
 %syn: O C(V).
- \*DAD: xob bexun bebinam.  
 \*FAA: aval dodam begam.  
 %mor: adv\aval reflex pron\xod-1s\lam be-v\g&pres-1s\lam.  
 %syn: A S VI.  
 [NPron].
- \*FAA: na abcd aval begam.  
 %mor: neg social minor\na n\abcd adv\aval be-v\g&pres-1s\lam.  
 %syn: <minor O A VI>.
- \*DAD: aval chi begi?  
 \*FAA: aval abcd.  
 \*DAD: aval abcd begu.  
 singing song
- \*DAD: merci merci. xob baladi beshma:ri? amir hossein bara: abjit beshma:r.  
 \*FAA: dige hisho balad nistam.  
 %mor: adv\dige adv\hisho n\balad neg\ni - cop\st-1s\lam  
 %syn: <A A C VI>.
- \*DAD: dige hici balad nisti?  
 \*FAA: a:le.  
 counting
- \*DAD: ha:la: ye sher bara: ba:ba:t bexun.  
 \*FAA: na ala:n dige hishi balad nistam.  
 %mor: neg social minor\na adv\dege adv\hishi n\balad neg\ni-cop\st&pres-1s\lam.  
 %syn: < A A A C VI>.
- \*DAD: xeile xob.  
 \*FAA: bede bebolam.  
 %mor: be-v\de be -v\bol&pres-1s\lam.  
 %syn: <Vimp VI>. V X Y
- \*DAD: chi bedam bebori?  
 \*FAA: ka gaz  
 \*DAD: ka:qaz. in ka:qaz. xob bebori chi mixa:y bebori?  
 \*FAA: hamasho.  
 \*DAD: xob bebor bebinam.  
 \*FAA: mibore.  
 %mor: mi-v\bor&pres-3s\le.  
 %syn: <VI>
- \*DAD: mova:zeb ba:sh dasteto nabore.  
 \*FAA: xx mixa:d bebolam.  
 \*DAD: mixa:y bebori?  
 \*FAA: boidam.  
 %mor: v\borid&past-1s\lam.  
 %syn: <VI>.
- \*DAD: mova:zeb ba:sh to cheshe kasi nazani.  
 \*FAA: ba:she.  
 \*DAD: xob.  
 \*FAA: mixa:m bibolamesh.  
 %mor: mi -aux\xa:&pres-1s\la:m be -v\bor&pres-1s\lam-3s\esh.  
 %syn: <VI VIsIo>
- \*DAD: inja: koja: bad ba:ba:?

- \*FAA: eh raftim ba.  
 \*DAD: koja: raftim.  
 \*FAA: inja: raftim.  
 %mor: det\in adv\ja: v\raft&past-1p\im.  
 %syn: <A VI>.  
 \*DAD: inja: koja: bad raftim?  
 \*FAA: dodamun raftim.  
 %mor: pron reflex\xodamun&1p v\raft&past-1p\im.  
 %syn: S VI.  
 [NPron]  
 \*DAD: xodemun raftim?  
 \*FAA: a:re.  
 \*DAD: shoma: che ka:r kardi inja:?  
 \*FAA: xada: dodam.  
 %mor: n\xaza: v\xord&past-1s\am.  
 %syn: <O VI>  
 \*DAD: xaste shodi?  
 \*FAA: a:le xx a s.  
 \*DAD: qaza: xordi? che ka:r kardi?  
 \*FAA: qaza: dodam.  
 %mor: n\qaza: v\xord&past-1s\am.  
 %syn: <O VI>.  
 \*DAD: dige che ka:r kardi?  
 \*FAA: nuha:he dodam.  
 %mor: n\nusha:be v\xord&past-1s\am.  
 %syn: <O VI>.  
 \*DAD: nushabe xordi? dige chi?  
 \*FAA: ga:ga:  
 \*DAD: qa:qa: xob.  
 \*FAA: jibsh  
 \*DAD: chips? chi?  
 \*FAA: jibsh.  
 \*DAD: qashang begu.  
 \*FAA: jibsh doda m.  
 %mor: n\chips v\xord&past-1s\am.  
 %syn: <O VI>.  
 \*DAD: dige chi?  
 \*FAA: dige gek todam.  
 %mor: adv\dige n\keik v\xord&past-1s\am.  
 %syn: A O VI.  
 \*DAD: ba:zi ham kardi? a:re?  
 \*FAA: a:b dodam.  
 %mor: n\ a:b v\xord&past-1s\am.  
 %syn: <O VI>.  
 \*FAA: jisham kadam.  
 %mor: n\jish- det\am&1s v\kard&past-1s\am.  
 %syn: <O VI>.  
 [N Det].  
 \*DAD: xob  
 \*FAA: jisham dota: tadam.  
 %mor: n\jish-det\am&1s adv\dota: v\tad&past-1s\am.  
 %syn: <O AVI>  
 [N Det].  
 \*FAA: nega: kadam.  
 %mor: n\nega: v\kad&past-1s\am.

- %syn: < CompVI>  
 [N VI].  
 \*FAA: dadu.  
 \*DAD: dota: jish kardi?  
 \*FAA: a:re dota: jish kadam.  
 %mor: minor adv\dota: n\jish v\kad&past-1s\am.  
 %syn: <A CompVI>.  
 [N VI].  
 \*DAD: xob dige chi?  
 \*FAA: dige dadolatamo shoshtam.  
 %mor: adv\dige n\dast c\o n\sorat-1s\am-o marker\o v\shost&past-1s\am.  
 %syn: <A O VI>  
 [ X c X].  
 \*FAA: bolidamesh.  
 %mor: v\bordi&past-1s\am-3s\esh.  
 %syn: <VIsIo>.  
 \*DAD: boridi merci. che qashangam boride. mova:zeb ba:sh qeichi to cheshet  
 nare.  
 \*FAA: boridam.  
 %mor: v\bordi&past-1s\am.  
 %syn: <VI>.  
 \*DAD: begu bebinam da:da:sh koja: mire soba:?  
 \*FAA: nesely mile.  
 %mor: adv\nersery mi-v\l&pres-3s\e.  
 %syn: <A VI>.  
 \*DAD: nursery mire?  
 A VI.  
 \*FAA: neseliye man mile.  
 %mor: adv\neseli poss marker\ye pron\man&1s mi-v\l&pres-3s\e.  
 %syn: A VI  
 [N Pron].  
 \*DAD: shoma: chi? shoma: che ka:r mikoni?  
 \*FAA: neseliye dodam milam.  
 %mor: adv\neseli refelex pron\dodam&1s mi-v\l&pres-3s\e.  
 %syn: A VI  
 [N N Pron].  
 \*DAD: shoma: mixa:y nursery xodet beri? xob xa:nom moalemeto dus da:ri?  
 \*FAA: a:le.  
 \*DAD: che ka:r mikoni unja:?  
 \*FAA: ba:ha:sh ba:zi mikonam.  
 %mor: prep\ba-o\ha:sh& 3s n\ba:zi mi-v\kon&pres-1s\am.  
 %syn: A CompVI.  
 [Pr Pron]. [NVI].  
 \*DAD: ba:ha:shun ba:zi mikoni?  
 \*FAA: dustame.  
 %mor: n\dust-poss 1s\am-cop\le&pres\_3s.  
 %syn: <C(V)>.  
 \*DAD: dustete?  
 \*FAA: a:le.  
 \*FAA: kodum ha:la: bebolam?  
 %mor: q\kodum adv\ha:la: be-v\bol&pres-1s\am.  
 %syn: <QO A VI>.  
 \*FAA: kokdum ha:la: bebolam?  
 %mor: q\kodum adv\ha:la: be-v\bol&pres-1s\am.  
 %syn: <QO A VI>.

- \*DAD: kodum ha:la: bebori? xob ino bebor.  
 \*FAA: kodum?  
 %mor: q\kodum  
 %syn: Q  
 \*FAA: eh.  
 \*DAD: in chiye?  
 \*FAA: mushak.  
 \*DAD: mushake?  
 \*FAA: a:re.  
 \*DAD: mushako mixa:y che ka:resh koni?  
 \*FAA: mixal bebalamesh.  
 %mor: mi-aux\xa:& pres-1s\lam be-v\bor&pres-1s\lam-3s\esh.  
 %syn: < VI VIso>.  
 \*FAA: boxolamesh.  
 %mor: be-v\xor&pres-1s\lam-3s\esh  
 %syn: VIso.  
 \*DAD: mixa:y boxori? xordani nimishe.  
 \*FAA: a:le.  
 \*DAD: mage xordaniye?  
 \*FAA: a:le mixa:m boxolamesh.  
 %mor: minor\are mi-aux\xa:-1s\lam bo-v\xp;-1s\lam-3s\esh.  
 %syn: < VI VIso>.  
 \*DAD: boxor bebinam ux ux.  
 (laughing)  
 \*DAD: xob dige lus nasho.  
 (laughing).  
 \*DAD: ux mova:zeb ba:sh. gofti bebxshid. begu bebinam.  
 \*FAA: bebshid.  
 \*DAD: boland begu.  
 \*FAA: beshid.  
 \*FAA: in mushak xodam.  
 %mor: det\in n\mushak v\lord&past-1s\lam.  
 %syn: <S VI >.  
 [DN].  
 \*DAD: xob beya: in da:sta:no vase man tarif kon.  
 \*FAA: na dodet bexunesh.  
 %mor: minor\na reflex pron\dodet&2s be-Vimp\Xun-3s\esh  
 %syn: +S.  
 \*DAD: xodam bexunam?  
 \*FAA: ha:.  
 \*FAA: xodet bexunesh.  
 %mor: reflex pron\dodet&2s be-Vimp\Xun-3s\esh.  
 %syn: +S.  
 \*DAD: xodam bexunam bara:t.  
 \*FAA: a:le bala:m.  
 \*FAA: aval aval aval ino bexun.  
 %mor: adj\aval pron\in-o marker\o be-Vimp\Xun.  
 %syn: < A O Vimp>. V X Y+.  
 \*DAD: aval ino bexunam.  
 \*FAA: na:xa:diy e.  
 %mor: n\naqa:shi-cop\ye&pres.  
 %syn: <C(V)>.  
 \*DAD: naqashiye?  
 \*FAA: a:re.

- \*FAA: naqa:di a:dam tush mikeshe.  
 %mor: n\naqa:shi n\la:dam PP\tu-pron\sh&3s mi-v\kesh&pres-3s\e.  
 %syn: O S A VI  
 [Pr Pron].
- \*DAD: naqa:shi a:dam tush mikeshe.  
 \*FAA: ino.  
 %mor: pron\in-o marker\o.  
 %syn: elliptical
- \*DAD: ino?  
 \*FAA: in bexun.  
 %mor: pron\in be-vimp\un.  
 %syn: <O Vimp>.
- \*DAD: bexunam?  
 \*FAA: ala:n bexun.  
 %mor: adv\ala:n be-vimp\un.  
 %syn: <A Vimp>.
- \*DAD: un un chiye ur mize?  
 \*FAA: kodum?  
 %mor: Q\kodum.  
 %syn: <Q>.
- \*FAA: kodume?  
 %mor: q\kodum-cople&pres\_3s.  
 %syn: <WHQ X>.
- \*DAD: bozorgi chiye tush ka:rton nega: mikoni?  
 \*FAA: tush hamuni didi mixune?  
 pause
- \*DAD: in chiye?  
 \*FAA: chi?  
 %mor: q\what  
 \*FAA: telejun.  
 \*DAD: television. xob xob in chiye?  
 \*FAA: atol.  
 \*DAD: chi?  
 \*FAA: aya: yi.  
 \*DAD: a:nten? begu a:nten.  
 \*FAA: atel.  
 \*DAD: a:nten xob. una: chiye neshun mide?  
 \*FAA: kodum?  
 %mor: q\kodum  
 %syn: Q
- \*FAA: koduma:?  
 %mor: q\kodum-pl\la:  
 %syn: <WHQ>
- \*FAA: una: atululu  
 \*DAD: chi beya: inja: bebinam.  
 \*FAA: koduma:?  
 %mor: q\kodum-pl\la:  
 %syn: <WHQ>
- \*DAD: hamuna:  
 \*FAA: ina:?  
 %mor: pron\in-pl\la:  
 %syn: elliptical
- \*DAD: a:re. beya: inja: begu.  
 \*FAA: tota:q totame.  
 %mor: prep\to n\ta:q possmarker\0 reflex pron\xodam&1s-cople&pres\_3s.

- %syn: < C(V)>.  
 [Pr Pron].  
 \*DAD: dota:sh ma:le xodete?  
 \*FAA: ishamo midam  
 \*FAA: mibandi?  
 \*DAD: a:ha:n una: chiye?  
 \*FAA: koduma:?  
 %mor: q\kodum-pl\va:  
 %syn: <WHQ>  
 \*DAD: hamun dota:.  
 \*FAA: ina:?  
 %mor: pron\in-pl\va:  
 %syn: elliptical  
 \*FAA: hishshi.  
 %mor: neg adv\hichchi  
 %syn: A  
 \*DAD: ala:n gofti?  
 \*FAA: hishshi.  
 %mor: neg adv\hichchi  
 %syn: A  
 \*DAD: hichchi.  
 \*FAA: ba:ba: bexunesh.  
 %mor: voc\ba:ba: be-vimp\lxun-o\esh.  
 %syn: <VOC VimpIo>. V X.  
 \*DAD: bara:t bexunamesh.  
 \*FAA: in dod dash da:sh ke chi?  
 \*DAD: ino gerftam dasam: agar shoma: sobat kardizabt konam.beshin.  
 \*FAA: ino baba:m bexun.  
 %mor: pron\in-o\o prep\bara:-ls\m be-vimp\lxun  
 %syn: <O A Vimp>.  
 [Pr Pron].  
 \*DAD: inam bara:to mixuna%mor: ba:she mixunam  
 \*FAA: bexun.  
 %mor: be-vimp\lxun  
 %syn: <Vimp>  
 \*DAD: ye dune beza:r qashange sho peyda: konim.  
 \*FAA: eh a:ti keete.  
 %mor: minor\eh n\la:tish v\gerfte& pres perf\_3s.  
 %syn: < MINOR CompVI>.  
 [N VI].  
 \*DAD: inja: a:tish gerefte?  
 \*FAA: a:re a:tish gehefte.  
 %mor: minor\eh n\la:tish v\kerfte& pres perf\_3s.  
 %syn: <CompVI>.  
 [N VI].  
 \*DAD: xob dige chi?  
 \*FAA: dosakesh dadam mude.  
 \*FAA: a:tis oade.  
 \*DAD: nafahmidam chi?  
 \*FAA: i ida: a:tis geh gehefte.  
 %mor: adv\inja: n\la:tish v\gerefte & presperf-3s.  
 %syn: <A CompVI >.  
 [N VI]  
 \*DAD: inja: a:tish gerefte?  
 \*FAA: a:le.

- \*FAA: i da:sh pa:le sode.  
 %mor: adv\inja:-o\sh adj\pa:re passv\sode&presperf-3s.  
 %syn: <A CompVI>.  
 [ N D]. [AdjV].
- \*DAD: inja:sh pa:re shode?  
 \*FAA: ija:sh pa:le sode.  
 %mor: adv\ija:-o\sh adj\pa:re passpart\sode&presperf-3s.  
 %syn: <A CompVI>.  
 [N D]. [AdjV].
- pause
- \*FAA: ino bexun.  
 %mor: pron\in-o\o be-vimp\lxun  
 %syn: XY Vimp.
- \*DAD: chiye?  
 \*FAA: kodum?  
 %mor: WHQ\kodum.  
 \*DAD: in chi shode?  
 \*FAA: in ine.  
 \*FAA: un.  
 \*FAA: in in ine.  
 \*DAD: inam une.  
 \*FAA: une.  
 \*DAD: xob.  
 \*FAA: ba:ba: dige in in in.  
 \*DAD: in chiye?  
 \*FAA: dadush  
 \*DAD: xargush. chiye?  
 \*FAA: dadush.  
 \*DAD: xob.  
 \*FAA: inam dodo.  
 %mor: pron\in-adv\lam n\jojo.  
 %syn: S A C.  
 \*DAD: inam juju.  
 \*FAA: inam go.  
 %mor: pron\in-adv\lam n\gol  
 %syn: S A C.  
 \*DAD: gol.  
 \*FAA: inam da neveste dadush.  
 %mor: pron\in adv\lam v\neveshte&presperf\_3s n\lxargush.  
 %syn: <S A VI O>.  
 \*DAD: inam neveshte xagush.  
 \*FAA: inam neveshte xargush.
- pause
- \*FAA: na na aval aval ino  
 \*DAD: man ke hamro xundam bara:t.  
 \*FAA: ino.  
 \*DAD: ino xundam.  
 \*FAA: na naxudi.  
 %mor: minor\na neg\na-v\lxud&past-2s\i  
 %syn: <VI>  
 \*DAD: shoma: begu bebinam in chiye.  
 \*FAA: me mese mese ine.  
 %mor: adj\mes-poss marker\le pron\in-cop\le  
 %syn: <C(V)>  
 [Adj pron]

\*DAD: mesle ine. in chiye xodesh?  
 \*FAA: mush.  
 \*DAD: mushe.  
 \*FAA: i na: mushe.  
 %mor: pron\in-pl\|a: n\mush-cop\|e&pres\_3s.  
 %syn: <S C(V)>.  
 \*DAD: inam mushe.  
 \*FAA: i mushe.  
 %mor: pron\in n\mush-cop\|e&pres\_3s.  
 %syn: <S C(V)>.  
 \*FAA: eh ina: mush nisht.  
 %mor: pron\in-pl\|a: n\mush neg\|ni-cop\|st&pres-3s.  
 %syn: S C V.  
 \*DAD: inja: mush nist.  
 \*FAA: inja: mus nist.  
 \*FAA: inja: mus nist.  
 \*DAD: inja: chiye?  
 \*FAA: in ha:  
 \*FAA: hishi.  
 @End.