

Child Directed Speech: Similarities and Differences between
Child Directed Speech:
Similarities and Differences between Saudi Mothers
and Fathers Based on Syntax and lexical Items

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Abstract

This study investigates the differences and similarities between male and female parents while speaking to children. Speech styles were analyzed based on two linguistic areas; utterance-construction level and lexical categories. The parents' speeches were recorded during different occasions and activities. Each recording was six to eight minutes in average in order to collect data and find out different patterns in the adults' way of speaking to the kids. The results indicated that both mothers' and fathers' speech with their children is mainly constructed as imperatives, questions and fragments. The results also showed that male parents show more complexity in their speeches to their kids. They use verbs more frequently due to the frequent use of the imperatives when they speak to the children. On the other hand, the common nouns and proper nouns are used more than verbs by the female parents. Based on the utterance-construction level, it is found that both male and female parents use questions and imperatives in general. The difference lies in how frequently they use these sentence types. The difference between the male and the female parents exists based on the more frequently used lexical categories. The male parents use more verbs while the female parents use more common nouns. It is found that some female parents usually use simpler range of vocabulary in which they use nouns more than verbs. Other aspects of child directed speech, like phonology and morphology, needs be studied and analyzed.

Keywords: Child directed speech, utterance construction, lexical categories, first language acquisition

1. Introduction

In normal everyday life, it is noticeable that women's speech is different from men's speech. The speech style of both genders differs in the vocabulary usage, types of sentences and also how frequent they use wh-questions and tag questions. Although it is believed that these patterns differ from person to person depending on the one's identity, it is also believed that there are differences between both genders in their speech styles.

However, there is a special speech register which is usually used by parents to speak to their kids. This special register, which is called CDS or child directed speech, facilitates the linguistic input for children. CDS carries different features in which the parents or the caregivers speak slowly with a higher and wider pitch or with exaggerated intonation to attract the child's attention. The grammatical construction of sentences is also simple and some parents usually use imperatives more frequently while speaking to their children. Furthermore, some caregivers usually use simpler range of vocabulary in which they use names instead of pronouns and nouns more than verbs.

I aim to investigate if the differences and similarities between male and female parents exist while speaking to children. This study investigates the usage of CDS in Saudi Arabia. I will be analyzing fathers' and mothers' speech styles based on two linguistic areas, utterance-construction level and lexical categories. This analysis will show if there are patterns among the mothers' CDS as well as the fathers' CDS. The results of this analysis will help to compare the features of CDS used by both, mothers and fathers.

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2. Literature Review and related studies

2.1. A construction Based Analysis of Child Directed Speech by Thea Cameron-Faulkner, Elena Lieven and Michael Tomasello

This article aimed to analyze the structural pattern of the language utterances directed at the children by the mother to teach them basic units of the language. Two Chomskian propositions of generating unlimited constructions and learning from "there to here" have proved that the children's language learning is something different (p.841). The article argued that children's language learning develops on the function and usage-based, as it moves from lexical to abstracts and is based on the computation aspects.

The article stated that this learning of language is based on early structure of specific linguistic terms with verbs, "pronouns and pronoun-clitic combinations" as primary categories (p.844). However, most of this category-based learning was based on the context of multiple stimuli. Further investigation revealed that most adults use "higher pitch and exaggerated intonation" when implying specific utterances to talk to their children interspersed with fewer "starts and hesitations" (p.847). The article analyzed major areas in utterance level constructions, mostly occurred words and phrases and item-based frequencies to find out relationships between them. The article has adopted the method of taking linguistic data from CHILDES database for analysis. Specific limits were set for the data retrieval specifically in terms of social status as children are from the middle class. The categories selected included fragment, questions, imperatives, copulas, subject-predicate constructions and complex utterances with two lexical verbs. The results were analyzed after the collection of data, and it was found that around 7% one-word utterances showed diversity in lexical terms, while this average for questions was 15-16%, for imperative 9%, for copula

construction 15%, subject-predicate 10%, and complex construction 6%. The most important thing in this correlation was the frequency of the mother repeating the same item with focus and attention on a single word and items. The construction of the repeated utterances has been found as 98% NPs, VPs, PPs and Aps. Beyond this category, the article argues, the major role is played by "repetition and repetition with variation" (p.868). The article thus concludes that this study highlights the mastery of language of the specific items, utterances and categories which play a major role in adult language learning later.

2.2. On the Status of Child Directed Speech: Does Mothers Determine the Process of First Language Acquisition by Mohammad Reza Khodareza and Ramin Asadi Jamnani

The article aimed to find out how far child directed speech or CDS works in the acquisition of the first language. The article argued that learner is the center of language acquisition process, but there are several other factors such as innate ability, linguistic environment, input, role of mothers and above all frequency of the occurrence of language acquisition also play their role. Referring to repetition, "higher pitch than usual and intensified intonation", the article highlighted different language learning theories (p.1358). The authors argued that among these theories, Chomskian argument of the role of nature is of critical importance, which, they stated, has been backed up by Pinker as language acquisition having an intrinsic capacity with environment adaptation quality in an individual. They stated that Bickerton also supported LAD concept of Chomsky, adding, that language principals are modified for children with disregard of quality or quantity, stressing upon the need of inputs. Then they compared it with the impressionistic views as propounded by B. F. Skinner, highlighting the important role of environment in learning process. In this connection, the processes of stimuli,

Child Directed Speech: Similarities and Differences between _____ responses, associations and reinforcements are of critical importance. Although quality and quantity do not matter, the authors argued, saying this approach has overlooked several other influencing factors. Therefore, interactionist view takes the lead in that this view is of crucial importance in language acquisition. They mentioned Burner and Vygotsky as the major exponent of the theory of the role of social interaction in the language learning. Even this theory did not take into account the quantity and quality, though the article is clear that CDS has some role in the language acquisition.

The article states that as far as CDS is concerned, it is clear that the children learn several structures of questions and imperatives more easily. This helps them segment the linguistic structures, but another point is emotional role in learning. In terms of vocabulary and syntax, the authors state that syntactic and lexical developments take place simultaneously but lexical development and its growth depends on various factors including but not limited to parent's role and environment. However, vocabulary depends on the exposure and hard work. In other words, in terms of linguistic acquisition, CDS has some importance as it has some role in understanding how syntax and vocabulary is learnt in a language learning process.

2.3. Five-Year-Olds' Interactions With Fathers Versus Mothers by Rosalind G Davidson and Catherine E. Snow

The main argument of the article was whether mother takes lead in CDS or fathers and to what extent. The age of the children has been set as five to evaluate through the evidences, conversational functions and cognitive challenges of the language. The authors argued that mothers across the world adjust their language in tandem with the child's development. Compared to them, fathers usually use imperatives and questions, rare lexical items and interruptions when talking to the children,

while mothers are more fluent, more geared to easy lexical items and more prone to using yes-no question type of utterances. Relating this to the Bridge Hypothesis, the authors argued that the language spoken by fathers is "less finely tuned and more challenging" which is geared to talking to strangers, discovering abstract concepts and unique topics (p.232). The authors have selected data for analysis from 12 five-year old children, eight boys and four girls and their parents with 20 minutes audiotape of their linguistic communication.

After thorough analysis, the authors reached the conclusion that mothers "consistently talked more" than fathers (p.233). They argue that children were complex with speaking to their fathers, and requested information more from their mothers. Mothers were prone to offer more information than fathers in utterances. The children inquired more from mothers than fathers. Topic level and topic initiations were also more in terms of fathers in both types of dyads as well as family settings. Even in terms of the use of rare lexical items, mothers were not far behind fathers. They reached the conclusion that "mothers are the child's primary language teacher while fathers, who are typically less familiar than mothers with the context of young child's talk function as interlocutors" (p.239). Therefore, it is the role of mother that is very important in CDS.

2.4. Infants of Chronically Depressed Mothers Learn in Response to Male, But Not Female, Infant-Directed Speech by Peter S. Kaplan, Jessica K. Dungan, and Michael C. Zinser

The article examined the hypothesis that infants aging 5 to 13 months belonging to depressed mothers failed to learn from infant directed speech and same is the case if it is given by their father. The reason author has given is that it could be that the "tune out" the female voice even if it is from other non-depressed

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woman. The authors argued that clinically diagnosed prenatal depression takes its toll from the mother as well as the infant. They are of the view that that earlier experiment conducted on 4-month old infants showed that they do not respond to the infant directed (ID) face recognition stimuli from their depressed mothers but respond to the non-depressed mothers. Therefore, it is derived from this experiment that the children of the depressed mothers are at the risk of showing problems in their cognitive development and also delay in learning in schools. The authors deduced that in chronically depressed mothers, the infants fail to respond to even "high quality stimulation provided by a non-depressed caregivers" (p.140).

In order to test the validity of their argument, the authors applied the test of the model of association learning "a conditioned-attention paradigm -- in which a segment of ID Speech signals the presentation of a smiling face" (p.140). In 4-month infants, they argue, it could be the failure on perceptual or emotional level. However, in older children from 5-to-10 months old, it could be that a long duration in depressed condition impact their learning abilities. The authors conducted two experiments first on 40 children selected through an advertisement with 5-to-12 months of age of clinically diagnosed depressed mothers with BDI¹ of 19.3 and undepressed mothers of BDI 13 or below. The speech stimuli of speech segment "pet the gorilla" was shown two times to each infant with other variables kept in check such as crying, and background sounds or noise. The data was collected keeping in the view the duration of looking during the checkerboard-alone trials from during the speech segment including trials. It showed a different picture that the infants of depressed mothers showed no significant difference that was almost zero but in the case of non-depressed mothers, it was vice

¹ Beck Depression Inventory

versa and showed a marked difference in both depressed and non-depressed ID. Experiment two was conducted on the male voice as an alternative which also showed the marked difference among the 21 infants selected for the experiment. Therefore, they reached the conclusion that their hypothesis is correct, for infants of depressed mothers' ID speech condition and duration of depression episode showed "infants learning problems (p.146). Even in the case of male voice, those infants of depressed mothers do not show any difference in their response. They argue that it could be that male ID speech could have been the "appearance of smiling female face" but only for the infants of nondepressed mothers and not of the depressed mothers. Hence, the quality of maternal stimuli could affect the learning of the infants in the later age and that is why they "tune out" the female ID speech.

2.5. Do mothers and Fathers differ in their speech styles when speaking to their children? Are there speaker gender effects on parents' language behavior by Elizabeth Hill

Referring to the research of Jespersen, Elizabeth Hill claims that women are generally hyperbolic and verbose, while men are direct and assertive in their speech when conversing with the children. Quoting several other renowned linguists such as Zimmerman, Lakoff, Fisman, Trudgill and Tannen, she states that in a Child-Directed Speech, men and women differ not only in their language but also in their linguistic behavior. She has outlined eleven differences on the basis of speech of males and females. After selecting a six-year-old kid and their parents in her experiment, she states to study "Talking, negative speech, supportive speech, directive speech, non-standard pronunciation, interruptions, hedges, minimal responses, questions, intonations and jocular or insulting language" (p.167).

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Hill argues that out of 279 utterances, the mother uttered 40.5% while the father uttered only 28.7 %, and the rest of the utterances were that of the toddler. This proves that women are more talkative than men. She states that as far as negative speech is concerned, it shows criticism. In the case of her experiment, the mother uses only eight utterances while the father used only four negatives. In case of supportive speech that means collaboration, the mother used first person plural which shows supporting behavior in conversation, while the father is quite less supportive and used first person rarely. As far as directive speech is concerned, the mother used 21 times while the father used it only two times. In non-standard pronunciation, the father takes lead and also in interruptions with 55.3% score.

In minimal responses, tag question and intonations, the mother was frequent in minimal responses, used 19 tag questions and varied in her while the father respectively used only two minimal responses, two tag questions and kept the intonation almost the same. She finds that almost all the points pointed out by linguists about women and their speech pattern in Child-Directed Speech are correct expect a few ones among which the use of negative is at the top in which she says that "This counters the traditional argument suggested by linguists such as Lakoff that women are weak" and that they use less negative (p.168). In the same way, she also finds contradiction of the father as using negative less frequently as he is an authority figure at home. By the end, she argues that she has found evidences that women are more prone to using Child-Directed speech in learning, for a mother "plays the role of a facilitator, using polite and encouraging behavior", while men are usually critical and assertive but there could be discrepancies due to the role of a father such as a stepfather has less power than a real father, the reason that he may use language less authoritatively (p.170).

2.6. Does frequency count? Parental input and the acquisition of vocabulary by Goodman, Dale and Li

The research investigates the relationship between age of acquisition of words and the input frequency and highlights how the input frequency affects the acquisition of new words. The previous studies on the age of acquisition of new words examine the factors which influence acquisition for only one lexical category or limited number of words. Also, the previous studies examine the input frequency and when words are learned from an indirect approach rather than directly studying the interaction between frequency and the age of acquisition of new words (p.517). The purpose of the study is to investigate the relationship between early lexical acquisition and input frequency of the words from a large vocabulary bank including all lexical categories; and also studies the influence of input frequency on development of comprehension and production vocabulary (p.519).

To study the child's acquisition of the word, Communicative Development Index's Words and Gestures list was used across all lexical categories. There were total of 396 words for children aged 0; 8 to 1; 4 and a total of 680 words 1; 4 to 2; 6. The parents were asked to fill one bubble if the child only understood the words and fill another bubble if he could also produce it (p.520). For parental frequency, CHILDES database was used to extract all parental transcripts for the words which were marked in CDI. The average age of children in CHILDES was 36 months and over 75% of transcripts were below 4; 0. After exclusion and final selection, 562 words were taken for analysis and were assigned to 6 different lexical categories (p. 521).

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3. Subjects:

The participants were seven parents. They were four males and three females. All of them were from Saudi Arabia and they came from the southern region. The fathers' ages were 25- 33 while the mothers were in their twenties. The male parents interacted with two girls and two boys. One of the girls was two and the other was 2; 5 years. The ages of the two boys were 2; 3 and 2; 8. On the other hand the female parents interacted with two girls and two boys. One of the two girls was 13 months old while the other girl was 2; 5. The boys were 3; 8 and 4; 4 years old. All children were about 2 - 4.5 years old except one girl who was 13-months old.

4. Data Collection:

The parents' speeches were recorded and analyzed. The data consisted of seven Arabic-speaking parent-child dyads. The recordings were mainly recorded by phones. The parents were told to record themselves talking to their children in order to see how the children reacted. Even if there was no reaction from the children, the parents were told to keep up speaking as they used to do. This was to make the parents deal with their children naturally as they usually did in their daily lives. The participants were recorded during different occasions and activities. Some of them recorded themselves as if they were introducing their kids to their followers on Snapchat and speaking to the kids at the same time. Some parents were video recorded while the parents and their kids were interacting with each other. Each recording was six to eight minutes in average in order to collect data and find out different patterns in the adults' way of speaking to the kids. During the recordings, the parents and the children were engaging freely.

5. Results and discussion:

5.1. Utterance construction

Table 1 shows that the fathers' speech with their children is mainly constructed as imperatives, questions and fragments. The percentage of the imperatives is 58.49%. Questions percentage is 19.34% while fragments are 12.74%. These results prove that the fathers' speech with their children, in Saudi Arabia, is mainly constructed as imperatives and questions. By analyzing the major areas of utterance constructions, it is found that imperatives and questions are used more frequently by fathers. This goes along with what Davidson and Snow (1996) have stated that fathers usually use imperatives and questions.

Table 1	Male with boy	Male with boy	Male with girl	Male with girl	Average	Percentage
Questions	11	8	10	12	10.25	19.34
Fragments	7	8	7	5	6.75	12.74
Imperatives	28	33	33	30	31	58.49
Statements	3	5	7	3	4.5	8.49
Complex sentences	1	0	0	1	0.5	0.94

On the other hand, table 2 shows that the mothers' speech with their children is mainly constructed as questions, imperatives and fragments. The category that most frequently used is questions with 58.56%. The percentage of imperatives used by the female parents is 18.33% while the percentage of fragments is 11.15%. These results show that the mothers' speech with their children, in Saudi Arabia, is mainly constructed as questions. Cameron-Faulkner, Lieven and Tomasello (2001) have stated that most of all maternal utterances were questions and imperatives.

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Table 1	Female with boy	Female with boy	Female with girl	Female with girl	Average	Percentage
Questions	30	38	41	38	36.75	58.56
Fragments	5	8	8	7	7	11.15
Imperatives	13	9	9	15	11.5	18.33
Statements	4	6	4	5	4.75	7.57
Complex sentences	2	3	3	3	2.75	4.38

5.2. Lexical Categories

The results in table 3 show that the male parents use different lexical items while they are speaking to their children. Generally, the fathers show more complexity in their speeches to their kids. They use verbs more frequently due to the frequent use and repetition of the imperatives when they speak to the children. The percentage of the verbs uttered is 27.55%. This is the highest among all the lexical categories. The percentage of the common nouns is also high with 21.47% while the percentage of the proper nouns is 13.45%.

Table 3	Male with boy	Male with boy	Male with girl	Male with girl	Average	Percentage
Common nouns	45	38	40	43	41.5	21.47
Proper nouns	28	32	18	26	26	13.45
Verbs	62	53	62	60	59.25	27.55
Adjectives	13	15	20	13	15.25	7.89
Closed class	20	27	22	25	23.5	12.16
Others	28	25	28	30	27.75	14.36

Table 4, on the other hand, shows that the common nouns and proper nouns are used more than the verbs that were uttered by the female parents. The lexical category that is used most frequently is the common nouns with more than 25%. The total percentage of the proper nouns is 23.13%. It is found that about 20% of the words are verbs.

Table 4	Female with boy	Female with boy	Female with girl	Female with girl	Average	Percentage
Common nouns	62	55	56	32	51.25	25.63
Proper nouns	40	46	43	56	46.25	23.13
Verbs	53	45	42	24	41	20.5
Adjectives	17	15	12	23	16.75	8.38
Closed class	22	23	19	13	19.25	9.63
Others	29	31	22	19	25.5	12.75

6. Conclusion:

This study aims to analyze the different speech styles between the male and the female parents from Saudi Arabia while speaking to their children. Two linguistic areas have been investigated which are utterance construction and lexical categories. Based on the utterance-construction level, it is found that both male and female parents use questions and imperatives in general. The difference lies in how frequently they use these sentence types. The female parents tend to use more questions. On the other side, the male parents use more imperatives while speaking to their children. Both, the male and the female parents, use fragments in almost a similar quantity. The difference between the male and the female parents exists based on the more frequently used lexical categories. The male parents use more verbs while the female parents use more common nouns. It

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is found that some female parents usually use simpler range of vocabulary in which they use nouns more than verbs. Other aspects of child directed speech, like phonology and morphology, needs be studied and analyzed in the future. For example, the study of the morphemic structures that are used by parents is also an important aspect. This will show how complex is the language that is used by both, the male and the female caregivers. This will show how frequently they use the different morphemes and if there is an effect of these frequently used morphemes.

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