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Research Paper

Nominal and Pronominal Referring Terms in Speech of an Arabic-English Bilingual Child: A Case Study

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Abstract

This study was designed to trace the developmental path of the nominal and pronominal referring systems in the production of an English-Arabic bilingual child. The child's spontaneous speech was recorded and data were analyzed. Data sets were clustered into 5 age spans starting from 1;9 to 3;9. The study was conducted under the framework of the semantic complexity hypothesis embedding 3 psychological principles of acquisition (i.e., ease of observability of referent, meaningfulness of referent, and distinctiveness of the sound signal that indicates the referent). The person-role hypothesis was also used as a framework to explain the development of the pronoun systems of both languages. Findings provide further evidence for the early advantage of nouns as referring expressions. They also reveal the early emergence of nouns with concrete referents as well as nouns of meaningful referents. These findings confirm the importance of the person-role hypothesis in the sequence of acquiring pronominal referring expressions.

Keywords: Referring Expressions; Pronouns; Meaningfulness; Observability; Person-Role

1. Introduction

Investigating the development of nominal and pronominal expressions in a child's language sheds some light on how children make reference to themselves and how they socialize with others. It also gives hints about the child's linguistic development. As a result, the acquisition of nominal and pronominal referring terms is an area of interest to researchers. Most studies have investigated the acquisition of European referring terms by monolingual children (Charney, 1980; Chiat, 1981/1986; Clark, 1978; Deutsch, Wagner, Burchardt, Shulz, & Nakath, 2001; Huxley, 1970; Radford, 1988; Rispoli, 1994). Research on the acquisition of Arabic referring terms by monolingual children is scarce in the field of first language acquisition.

Some researchers have also investigated the acquisition of referring terms by bilingual children (De Houwer, 1990, 1995; Meisel, 1989, 1994, 2001). The participants of such studies were acquiring English and another European language. Notably, very few researchers have conducted studies on children acquiring referring terms in English and in other non-European languages such as Mandarin, Farsi, and Malaysian (Abd Samad & Arshad, 2017; Jalilevand & Ebrahimipour, 2013; Qi, 2005).

Not only have there been a dearth of qualitative and/or quantitative studies on the acquisition of Arabic referring terms by monolingual children, but also the acquisition of referring terms by bilingual children who are acquiring referring terms in Arabic and in any other language has not been researched so far.

Therefore, this study is the first endeavor to trace the order of emerging referring terms in English and Arabic in the speech of a bilingual child. The English and Arabic referring terms handled in this study are nominal terms that include noun phrases and kinship relation expressions as well as pronominal terms and personal pronouns. Where necessary, the emergence of proper names will also be traced.



Concerning the order of the occurrence of such referring terms, two particular hypotheses form the theoretical basis upon which the discussion of this study will be based. The first hypothesis is the semantic complexity hypothesis, which contends that the semantic complexity of a referring term determines its production order in the speech of developing children. Within the framework of this theory, terms are investigated and traced in light of the three psychological learning principles suggested by Steinberg and Sciarini (2006): (1) ease of observability of referent, (2) meaningfulness of referent and (3) distinctiveness of the sound signal that indicates the referent. Accordingly, it is expected that:

1. Proper names precede pronouns by means of the observability of their referents.
2. Referring noun phrases follow next. In this study, referring noun phrases are classified into nine classes, depending on their referents: clothes, objects, food, abstract, furniture, animals, people, places and appliances. Therefore, referring nouns with concrete referents are expected to emerge before nouns with abstract referents, and nouns referring to food are expected to develop faster than those referring to animals. The speed of the development of one class compared to the others is investigated in accordance with the three psychological principles suggested by Steinberg and Sciarini (2006).
3. Kinship relation expressions are expected to be less commonly used by the child because the child was living in the U.K. with his parents and without his extended family.
4. Pronouns are expected to be acquired at a later stage because of their semantic complexity. Dale and Crain-Thoreson (1993) posit that personal pronouns are semantically problematic for all developing children which makes them opt for the using names and phrases. Within the pronoun system, first-person pronouns are expected to emerge first, followed by second-person pronouns and third-person pronouns, respectively. This order of pronoun emergence in the child's speech is expected by virtue of observability of the referents. This was confirmed by Casseli, Casadio, and Bates (1999) and Steinberg and Sciarini (2006). On the other hand, the Arabic pronoun system is expected to cause a serious problem for the child due to its semantic complexity as well as the lack of distinctiveness of the sound signals that indicate their referents.

The second hypothesis concerns the order of occurrence of the pronouns depending on their thematic roles in the utterances. This is the person-role hypothesis, also known as the speech-role hypothesis. This hypothesis, proposed by Charney (1980), assumes that the order of pronoun production by developing children depends on the role that a child takes in a conversation. If the child is mainly the speaker, first-person pronouns are more likely to appear before second-person pronouns. However, if the child is mainly the addressee, the appearance of second-person pronouns is more likely to precede first-person pronouns (Chiat, 1981; Clark, 1978; Huxley, 1970).

Some developing children resort to pronoun-reversal phenomenon, which entails the substitution of *I* for *you* and *you* for *I* in face-to-face conversations. This pronoun-reversal phenomenon is linked with a deficit in the theory of mind (Hobson, 1990; Lee, Hobson, & Chiat, 1994). The main assumption of this theory is that children's ability of using first and second singular personal pronouns in conversations indicates their ability to appreciate other people's acts of "self-ascription" (Wechsler, 2010, p. 332). This theory has also been confirmed by Köder (2016) and Markova and Smolík (2014).

Therefore, this study was designed to achieve four main purposes:

1. To explore the manner in which a bilingual child starts using noun phrases as referring expressions in two typologically different languages: Jordanian Arabic and English. This aim stems from the importance of looking into the way bilingual children use their languages not only to refer to themselves but also to socially interact with people around them. It also stems from the importance of investigating the applicability of Steinberg and Sciarini's three psychological learning principles in the acquisition of these referring terms by a bilingual child;
2. To trace the order of the production of the different types of noun phrases based on their semantic importance for the child (meaningfulness);
3. To detect any particular sequence or order in which English and Arabic pronominal expressions appear in the child's speech. This aim stems from the importance of investigating the applicability of either or both hypotheses

(i.e., semantic complexity and person-role) to the acquisition of the pronoun systems of two typologically different languages;

4. To compare this bilingual child's English production with that of other monolingual and/or bilingual children wherever applicable.

2. Pronoun Systems in Jordanian Arabic and English

English and Arabic are two typologically different languages descending from two different families. Therefore, it is important to, first, describe the different pronoun systems in both languages. In addition, it is important to note that the form of Arabic used in this study is the form of Jordanian Arabic used in the capital city of Jordan.

To start with, English has a simpler pronoun system than Jordanian Arabic. All English pronouns are independent, that is, they are all free morphemes that stand by themselves and are not attached to other words. They also take various forms depending on their meaning and the role they play in a sentence. English pronouns have two numbers (singular/plural), three genders (masculine, feminine, and neuter), three cases (nominative, accusative, and genitive) and three persons (first-, second-, and third-person) in addition to the reflexive pronouns. Furthermore, English does not allow any utterance with a null pronoun, except for the imperative syntactic structure. Table 1 illustrates the classes of personal pronouns in English:

Table 1. *Personal Pronouns in English*

Person/Number	Gender	Subject	Object	Possessive Adjective	Possessive	Reflexive
Singular						
First		<i>I</i>	<i>me</i>	<i>my</i>	<i>mine</i>	<i>myself</i>
Second		<i>you</i>	<i>you</i>	<i>your</i>	<i>yours</i>	<i>yourself</i>
Third	Masculine	<i>he</i>	<i>him</i>	<i>his</i>	<i>his</i>	<i>himself</i>
	Feminine	<i>she</i>	<i>her</i>	<i>her</i>	<i>hers</i>	<i>herself</i>
	Neuter	<i>it</i>	<i>it</i>	<i>its</i>		<i>itself</i>
Plural						
First		<i>we</i>	<i>us</i>	<i>our</i>	<i>ours</i>	<i>ourselves</i>
Second		<i>you</i>	<i>you</i>	<i>your</i>	<i>your</i>	<i>yourselves</i>
Third		<i>they</i>	<i>them</i>	<i>their</i>	<i>theirs</i>	<i>themselves</i>

The Jordanian Arabic pronoun system is more complicated than the English pronoun system. Jordanian Arabic pronouns have two numbers (singular and plural), three persons (first-, second- and third-person), two genders (masculine and feminine) and four cases (nominative, accusative, genitive, and ablative). To maintain consistency, the term *subjective* replaces the term *nominative* and the term *objective* replaces the term *accusative* throughout this study.

In Jordanian Arabic, there are independent pronouns: Those that are free morphemes and are always subjects. Subjective pronouns can also be hidden or invisible. This means that sentences can be structured without an overt subject, which is usually called the null subject in syntax. The referent of the null subject can be inferred from the context. However, because the aim of this study was to investigate the production, rather than the comprehension of pronouns, the child's utterances with null subjects were disregarded.

In addition to the independent subjective pronouns, there are also dependent subjective pronouns or clitics—those that are bound morphemes attached to other words. Objective pronouns are always clitics or dependent. Both dependent subjective pronouns and objective pronouns are usually attached to verbs, whereas dependent genitive pronouns are attached to nouns and their forms are the same as those of dependent objective pronouns, except for the first-person singular objective pronoun. First-person dependent genitive pronoun is realized by [- ʔ], whereas first-person dependent objective pronoun is realized by [-n ʔ]. These dependent genitive pronouns are equivalent to English possessive adjective pronouns in one way or another. Possessiveness is also expressed by dependent ablative pronouns, which are always attached to prepositions. Ablative pronouns are very similar to the genitive pronouns in their forms.

It is worth noting that the pronoun system in Jordanian Arabic lacks reflexive pronouns, and other terms that are not categorized within the pronoun system are instead used. Therefore, this study sheds some light on the production of such terms vis-a-vis the production of English reflexive pronouns in the child's production.

To gain a better understanding of this complicated Arabic pronoun system, it is useful to illustrate these types of pronouns in different tables. Table 2 illustrates the system of the independent and the dependent subjective pronouns in Jordanian Arabic:

Table 2. *Independent and Dependent Subjective Pronouns in Jordanian Arabic*

Person/Number	Gender	Ind. Subject	Gloss	Dep. Subject	Example	Gloss
Singular						
First		ʔana	<i>I</i>	-t	katab-t	<i>I wrote</i>
Second	Masculine	ʔmta	<i>you/M</i>	-t	katab-t	<i>you wrote</i>
	Feminine	ʔmti	<i>you/F</i>	-ti	katab-ti	<i>you wrote</i>
Third	Masculine	hoe	<i>he</i>	-		
	Feminine	hije	<i>she</i>	-		
Plural						
First		ʔihna	<i>we</i>	-na	katab-na	<i>we wrote</i>
Second		ʔintu	<i>you</i>	-tu	katab-tu	<i>you wrote</i>
Third		homme	<i>they</i>	-u	katab-u	<i>they wrote</i>

As seen in Table 2, the third-person singular pronouns do not occur as dependent pronouns. They are usually inferred from the context. However, when it comes to the feminine third-person subject, the [-t] morpheme is attached to the verb, which is a dummy morpheme that is only used to mark the femininity of the hidden subject. Table 3 illustrates the dependent objective, genitive and ablative pronouns:

Table 3. *Dependent Objective, Genitive and Ablative Pronouns in Jordanian Arabic*

Person/Number	Gender	Pronouns	Object	Gloss	Genitive	Gloss	Ablative	Gloss
Singular								
First		-(n)ɪ	darab-n	<i>he hit me</i>	kta:b-i	<i>my book</i>	ɪl-i	<i>for me</i>
Second	Masculine	-ak	darab-ak	<i>he hit you</i>	kta:b-ak	<i>your book</i>	ɪl-ak	<i>for you</i>
	Feminine	-ek	darab-ek	<i>he hit you</i>	kta:b-ek	<i>your book</i>	ɪl-ek	<i>for you</i>
Third	Masculine	-o	darab-o	<i>he hit him</i>	kta:b-o	<i>his book</i>	ɪl-o	<i>for him</i>
	Feminine	-ha	darab-ha	<i>he hit her</i>	kta:b-ha	<i>her book</i>	ɪl-ha	<i>for her</i>
Plural								
First		-na	darab-na	<i>he hit us</i>	kta:b-na	<i>our book</i>	ɪl-na	<i>for us</i>
Second		-ku	darab-ku	<i>he hit you</i>	kta:b-ku	<i>your book</i>	ɪl-ku	<i>for you</i>
Third		-hom	darab-hom	<i>he hit them</i>	kta:b-hom	<i>their book</i>	ɪl-hom	<i>for them</i>

As inferred from Table 3, the three types of pronouns listed in the table are similar. The only difference that can be identified is in first-person dependent objective pronoun, which differs from its counterpart in the genitive and ablative forms.

Children realize that the main purpose of using language is to interact socially and emotionally and they act accordingly. One of children's speaker-hearer interaction methods is using proper names to identify themselves and those around them (Deutsch et al., 2001). The fact that children have the tendency to use proper names to refer to themselves and to people around them has been affirmed in many previous studies (Chiat, 1986; Qi, 2005; Tanz, 1980).

Children also realize the importance of using language to convey messages. Therefore, the use of referring noun phrases is considered as a means that enables them to have their intended needs met. The occurrence of the classes of such referring noun phrases depends on the three psychological learning principles suggested by Steinberg and Sciarini (2006).

Once children realize the pronominal reference system in their language, they face an overwhelming task of mapping forms onto functions as they try to replace nominal expressions with pronominal referring expressions (Clark, 1978; Clark & Sengul, 1979; Qi, 2005). Special difficulty lies in children's comprehension of the syntactic and thematic roles that each class of pronouns has (Chiat, 1986; Clark, 1978; Oshima-Takane, 1992; Oshima-Takane, Takane, & Shultz, 1999). For bilingual children, this difficulty doubles up. A child acquiring two languages is expected to handle the form-function mapping task in the two completely different systems of the different languages he or she is acquiring.

Therefore, it is of interest as well as importance to try to investigate the stages through which a bilingual child handles the dilemma he or she faces when acquiring this semantically complicated system.

3. Research Questions

This descriptive study traces the development of English as well as Arabic nominal phrases in a bilingual child's repertoire. It explores the development of kinship relation expressions and referring noun phrases as well as the development of the pronominal referring system in detail.

This study sought to answer the following research questions:

1. When and how does a child start using proper names to refer to himself or herself and/or to others in both languages?
2. In what order do English and Arabic classes of noun phrases appear in a child's repertoire?
3. When and in what order do the pronominal expressions of each language appear in a child's repertoire?

4. Methodology

4.1. The Participant

The participant was born in the U.K. The child's mother was a Ph.D. candidate majoring in language acquisition at the time. The L1 of the participant's parents was Ammani Arabic, which is the form of Jordanian Arabic used in the capital city of Jordan. The child's parents were fluent in English. The child spent the first 21 months at home with his grandmother, who flew to the U.K. to help in looking after the child. At that time, the child's mother was studying and his father was working. Therefore, throughout the early stages of the child's production, the child's dominant language was Arabic because he was mainly exposed to Arabic from his grandmother. Schlyter (1993) has proposed this dominance of one language over the other. He posits that the simultaneous development of two languages in the speech of bilingual children is not necessarily balanced because one of the languages might be stronger than the other.

At the age of 23 months, the child attended day care nurseries and, then, preschool nurseries and his grandmother returned to Jordan. In these nurseries, he was exposed to English for many hours on a daily basis. At home, the child's input was a mixture of English and Arabic. The child's father used more Arabic than English, whereas his mother used more English than Arabic to communicate with him. In addition to the many hours' exposure to English in the nurseries and to being spoken to in English by his mother, the child used to watch cartoon movies on English national channels. His limited exposure to Arabic and his longer exposure to the English language made English the child's dominant and preferred language. Lieven (2010) and Steinberg and Sciarini (2006) affirm this preference of one language over the other by children raised bilingually.

4.2. Data Collection

The author of this research, who is the participant's mother, collected the data analyzed in this study. The data collection took the form of audio and, in very few cases, video recordings of spontaneous speech between the mother and the child in both languages (i.e., English and Arabic). The child's mother spent the time with him reading books, playing with his toys, telling stories and singing nursery rhymes in both languages. These sessions were conducted almost every day during the first 5 years of the child's life. Each session lasted for about 45 min. The sessions were recorded in the child's room. These recordings were phonetically transcribed on site. The child's unintelligible utterances were transcribed as xxx, though they were very few. The transcribed utterances were, then, chronologically saved on a computer in Microsoft Word files. Each file consisted of the child's production, the adults' form, the number of times an utterance was repeated and, in cases where necessary, some details about the situational context. In addition, the glossary of the Arabic production was included. The transcription of the data was double-checked by the researcher's group-mate, who was a Jordanian Ph.D. candidate working on his dissertation on phonology at the time.

4.3. The Data

The data recording by both video and audio started when the child was only 1 year 5 months old and continued till the child was 5 years old. However, for the purpose of this study, audio- and video-recordings between the ages 1;9 and 3;9 are analyzed. The reason why 1;9 (21 months), rather than 12 months, was chosen as the starting point of this research is because the child started producing two-word utterances that are intelligible and meaningful at this particular age, not before. The reason why the child started producing meaningful two-word utterances later than 12 months lies in the child's acquiring two languages simultaneously. The process of acquiring two languages simultaneously has been proven to be slower than the process of acquiring one language (Brown, 2007; Steinberg & Scriani, 2006).

It is worth mentioning that the child was a verbally expressive boy, who constantly practiced telling stories while playing with his toys. He also enjoyed expressing his likes and dislikes freely. There are two more reasons as to why this age range was selected: First, the child's mean length of utterances (MLU_M) was calculated according to Brown's (1973) suggested stages of syntactic and morphological development and second, the production of the pronominal expressions in the child's speech was worked out within the framework suggested by Owens (2008).

4.4. Measuring the Mean Length of Utterances M

The MLU_M was originally designed to measure children's utterances in English (Brown, 1973). Children's MLU_M can be measured based on morphemes, words, or sentences. No previous researcher has attempted to measure a child's MLU_M in Arabic based on any of the three aforementioned elements. In this study, the MLU_M was calculated on the basis of the morphemes in English and Arabic.

The child's Arabic and English data were divided into 5 stages in light of Brown's (1973) suggested developmental stages.

Fifty English utterances from each age-stage were taken, handled, and counted, and the outcome was divided over 50. The same process was undertaken for the Arabic utterances. It is worth noting that mixed utterances (i.e., utterances in both English and Arabic) were excluded from the corpus. Proper names were identified as either English or Arabic, depending on the host language frame. In other words, if a proper name appeared within the Arabic context, it was categorized as the Arabic data. If it appeared in the English context, it was categorized as the English data. Table 4 illustrates the MLU_M in morphemes of the bilingual child in English and in Arabic from 1;9 to 3;9. The table also compares the child's MLU_M to Brown's (1973) suggested MLU_M :

Table 4. *The Child's MLU_M in English and Arabic*

Age	This Child's Production		Brown's Suggested MLU_M	
	MLU_M in English	MLU_M in Arabic	Age	MLU_M
Stage 1 21-26 months	0.8	2.7	12-26 months	1.0-2.0
Stage 2 27-30 months	2.4	2.8	27-30 months	2.0-2.5
Stage 3 31-34 months	3.5	2.9	31-34 months	2.5-3.0
Stage 4 35-40 months	4.8	3.9	35-40 months	3.0-3.75
Stage 5 41-46+ months	5.3	2.2	41-46+ months	3.75-4.5

This is, further, illustrated in Figure 1:

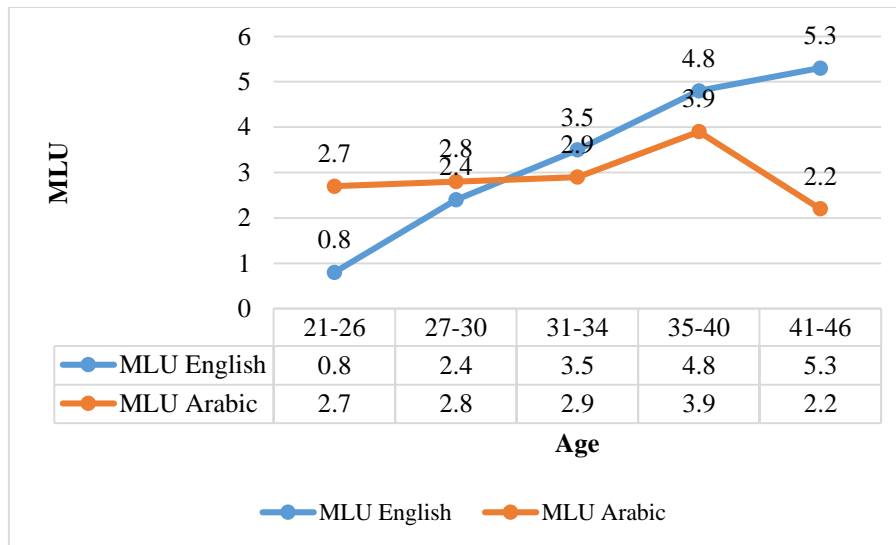


Figure 1. The Child's MLU_M in English and Arabic

From the data in Table 4 and Figure 1, the dominance of one language over the other is obvious in the two age spans. It is clear that the child's Arabic developed faster than his English did at an early age by virtue of the long exposure to Arabic by the child's grandmother. During this stage, his MLU_M in Arabic was 2.7, whereas in English it was only 0.8. Compared to Brown's (1973) suggested MLU_M rates, we can simply say that the child's English MLU_M was far behind Brown's (1973) at this particular age. However, his Arabic MLU_M was higher than Brown's (1973) suggested rate for this age. Therefore, his Arabic MLU_M rate was higher than his English MLU_M .

The discrepancy between his English and Arabic started to narrow down in the second stage as his English started to develop significantly and rapidly. In this stage, between 27 and 30 months, his English MLU_M was 2.4, which is within the range suggested by Brown (1973), whereas his Arabic MLU_M was still higher than that suggested by Brown (1973; MLU_M 2.8). However, the dominance of Arabic over English did not last long. The child's English MLU_M increased significantly, and at the age of 31-34 months, it shot up to 3.5, whereas his Arabic lagged behind at 2.9. Compared to Brown's (1973) third stage, the child's Arabic MLU_M remained consistent with Brown's (1973), whereas his English MLU_M exceeded it.

Stage 4 witnessed a rise in both the child's English and Arabic MLU_M , but his English still outnumbered his Arabic. His English MLU_M was 4.8 whereas his Arabic one was 3.9. Both means exceeded Brown's (1973) suggested MLU_M for the fourth stage, which is 3.0-3.75.

At the age of 41-46 months, the child's English obviously developed significantly. It shot up to reach 5.3, which is much higher than Brown's (1973) suggested mean of 3.75-4.5 for stage 5. Nonetheless, the child's Arabic retracted significantly to reach 2.2, which is much lower than Brown's (1973) suggested MLU_M for this stage.

Although the child's development of Arabic was slightly faster than that of English at the age of 1;7-2;5, it was not until the age of 2;6 when his English started developing rapidly. This rapid development coincided with the child's exposure to English for many hours and on a daily basis at the preschool nurseries. Therefore, the unbalanced quantity of input from both languages resulted in the unsurprising dominance of one language over the other at different stages.

5. Results and Discussion

For purposes of this study, the corpus analysis is introduced in five age clusters according to the child's nominal and pronominal production. It is worth noting that according to Bloom (1970), four occurrences at separate times of a term within 100 utterances signify the acquisition of that term. Accordingly, two occurrences at separate times of a term within 50 utterances were considered as an indication of the acquisition of that term in this study.

5.1. Stage 1 (Ages 1;9 to 2;2)

5.1.1. Arabic

The child's Arabic word tokens totalled 290. Out of the 290 tokens, 87 were referring noun phrases (30%); 57 were kinship terms (19.6%); 43 pronouns (14.8%), and 22 proper names (7.5%). His Arabic word types totalled 144, and his MLU_M was 2.7, which is beyond Brown's (1973) first stage in Arabic. His early vocabulary development reveals that he had already used referential expressions. Kinship terms and noun phrases as well as pronouns appeared relatively early in the child's Arabic production. Table 5 illustrates this in detail. It is important to note that the terms transcribed in the discussion do not represent the child's production as far as pronunciation is concerned.

Table 5. *The Child's Production of Arabic Referring Terms — Stage 1*

Total Word Tokens: 290
Proper Names (22) ¹ [9] ²
Kinship Relation Terms (57) [7]
Referring Noun Phrases (87)
Clothes (9) [2]
Objects (15) [3]
Food items (21) [5]
Abstract Referents (4) [1]
Furniture (4) [1]
Animals (16) [3]
People and Body Parts 0
Places (18) [4]
Appliances 0
Personal Pronouns (43) [7]
Total Word Types: 144

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

As can be inferred from Table 5, the early noun advantage, which is often reported in L1 development (Gentner & Boroditsky, 2001; Steinberg & Sciarini, 2006), was witnessed in the child's Arabic production. Referring noun phrases appeared more often than the other referential expressions, and phrases referring to concrete objects were used the most by virtue of the ease of observability of their referents, especially those objects directly connected to him. The child used these nouns communicatively. For instance, the noun [ba:s] *bus* has the highest proportion of the total simply because the family used to commute between the university and their home by bus. The term [nunu] is the childish term for *toilet* in baby talk; the term [nanne] is the childish term for *food*. The term [χeime] was used to refer to the small *tent* he had set up in his room and he used the term [kta:b] *book* to express himself whenever he wanted his mother to read him a story. The only terms of clothes that appeared were [zakeit] *jacket* and [bɔ:t] *shoes* by virtue of the meaningfulness of their referents—the child used them to express his wish to go out. Five different nouns denoting food also appeared, including the term [nanne] *food*. Three of the five were highly relevant to the child's needs. [ħabbe] *sweet*, [ʃips] *chips*, and [be:da] *egg* were his favorite types of food. The child used the term [ʔahwe] *coffee* because it was his parents' favorite drink. In the animal class, only [kalb] *dog*, [bisse] *cat*, and [ʃasfu:r] *bird* were often used. The only abstract noun phrase that occurred was [hawa] *air*, which the child used to refer to windy weather. This phenomenon of starting with nouns of concrete referents before nouns with abstract referents conforms to Steinberg and Sciarini's (2006) hypothesis.

The second most frequently used type of referring terms was kinship terms. Very few kinship relation expressions were recorded in the child's production at this stage. As expected, [mama] scored the highest occurrences, whereas [χalɔ] *maternal uncle* and [sidɔ] *grandfather* scored less than two and can, therefore, not be said to have been acquired. This scarcity of kinship relation expressions can be attributed to the fact that the child was living in the U.K., where he had no close relatives around. In contrast, [χaltɔ] *maternal aunt* and [teta] *grandmother* were used more often than [χalɔ] *maternal uncle* and [sidɔ] *grandfather*. This is because his aunt had visited the family and stayed there for a reasonable period of time and his grandmother spent the first year and a few months of the child's life with him, giving

the family a hand. But [ʃammə] *uncle* is not only used to refer to the brother of one's father but also to any male around. The child used [ʃammə] *uncle* to refer to the shopkeeper of the supermarket below the family's flat.

As for proper names, the child had acquired the necessary lexicon to refer to himself and to other people around him using proper names. Five instances of self-referring occurred using his name Yanal, and his family name appeared twice. He also used proper names to refer to his cousin and friend.

As for pronouns, it is obvious that the child had already acquired Arabic self-referring pronouns and a few others. Seventeen instances in which the child used [ʔana] *I* to refer to himself were recorded. Seven instances of [-ni] object *me* were also recorded at this stage. The object *me* appeared attached to the verb [ʔaʃtini] *give me*. It is also worth noting that two instances of using the first-person subject pronoun [ʔana] *I* occurred instead of the dependent object pronoun [-ni]. This high number of occurrences of self-referring expressions in subjective and objective cases signifies the child's realisation of the importance of self-expression. The dependent pronoun [-ha] third-person singular feminine object was used 10 times. The child often used it when requesting his mother or father to fix a toy, read a book, or do something for him.

The third-person singular male object pronoun [-ə] was used four times. The child used it in contexts where he was talking about hitting his cousin for annoying him or about loving a dog he saw on the television. Besides, this [-ə] pronoun was mistakenly used only once when the child told his mother that he loved her. He used [-ə] instead of [-ha] in the sentence [ʔana baħibə mama] to imply /ʔana baħibha mama/ *I love mommy*.

5.1.2. English

The child's word tokens in English totalled 286: 115 were referring nouns (40%), 16 were kinship terms (5.5%), 4 were proper names (1.3%), and only 3 were pronouns (1%). The child's English word types totalled 132, and his MLU_M was 0.8, which is below stage 1 on Brown's (1973) scale. Table 6 illustrates the child's production of English referring terms:

Table 6. *The Child's Production of English Referring Terms — Stage 1*

Total Word Tokens: 286
Proper Names (4) ¹ [3] ²
Kinship Relation Terms (16) [3]
Referring Noun Phrases (150)
Clothes (7) [2]
Objects (37) [8]
Food items (12) [8]
Abstract Referents (13) [3]
Furniture (7) [1]
Animals (30) [5]
People and Body Parts (11) [3]
Places (9) [2]
Appliances 0
Personal Pronouns (3) [1]
Total Word Types: 144

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Table 6 reveals that at this English vocabulary development stage, the child had no lexicon in English to refer to himself, very few kinship terms appeared in the child's English lexicon, and there was no record of any other personal pronouns except for the three occurrences of [you] as an object. Despite this, the child's production of English referring nouns outnumbered the production of the other types of terms. At this stage, it is obvious that the child's English vocabulary system was adding a reasonable number of terms—all of which could be attributed to concrete entities by virtue of the ease of observability of the referents. The child used [car] nine times while playing with his toys and the plural [cars] accidentally appeared once at the age of 1;11. Terms such as [feet], [head], and [hand] appeared four, four, and three times, respectively, and [feets] appeared only once at the same age. Because [feets] and [cars] were the only instances in which the plural morpheme appeared, they were disregarded. Many referring nouns of the animal category, such as [cat], [rabbit], [fish], [duck], and [tiger], appeared while reading picture books with his mother. The child also

used three food terms—[egg], [juice], and [milk]—that were of importance to him. In the place category, only [school] and [home] appeared six and three times, respectively. All the referring nouns that appeared in this stage were used communicatively by the child and were actually meaningful to him. The production of these referring nouns can be considered as a threshold in the development of the child's English lexicon.

In short, the child's Arabic pronouns outnumbered his English ones, even though they lacked the distinctiveness of sound signals that indicate the referent suggested by Steinberg and Sciarini (2006). However, his English referring nouns outnumbered his Arabic ones. This can be attributed to the fact that he liked using English with his mother throughout the short period of time he spent with her reading picture books and playing with his toys. Nevertheless, the discrepancy between the Arabic percentage of referring nouns and the English percentage is 30 to 40%, which can be considered as insignificant. Overall, it seems that at this early stage, because of the social circumstances in which the family used to live, the proportion of the Arabic target terms was higher than that of the English terms. This was expected by virtue of the long exposure to Arabic at this stage of development.

5.2. Stage 2 (Ages 2;3 to 2;6)

The child's production significantly doubled in both languages during this stage.

5.2.1. Arabic

Most of the target referential expressions that appeared in the child's Arabic production were similar to those that appeared in stage 1. The child used very few new referring expressions at this stage and his total Arabic tokens expanded to 773. Fifty-seven of these tokens (7.3% of the total Arabic tokens) were dependent and independent pronouns, only 24 (3% of the total Arabic tokens) were proper names, 51 (6.5% of the total Arabic tokens) were kinship expressions and 159 (20.5% of the total Arabic tokens) were referring nouns. His total Arabic types increased to 371, and his MLU_M was 2.8, which was an indication that he was beyond Brown's (1973) second stage. Table 7 gives a detailed description of the target terms:

Table 7. *The Child's Production of Arabic Referring Terms — Stage 2*

Total Word Tokens: 773
Proper Names (22) ¹ [9] ²
Kinship Relation Terms (51) [6]
Referring Noun Phrases (159)
Clothes (19) [5]
Objects (29) [12]
Food items (38) [14]
Abstract Referents (4) [2]
Furniture (14) [4]
Animals (6) [3]
People and Body Parts (0)
Places (20) [6]
Appliances (11) [3]
Personal Pronouns (57) [8]
Total Word Types: 371

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Table 7 shows that, in spite of the fact that the child's lexicon had expanded at this stage, the use of the target referential expressions did not show significant development. The child's self-referring strategy using his own name continued and he tended to use his own name to refer to himself whenever he wanted to report that he had done something wrong. In contrast, whenever he wanted to express his needs or feelings, he used the pronoun [ʔana] *I*.

The same kinship terms were used with the disappearance of [χaltə] *maternal aunt* because of her return to Jordan. The child also continued using the same dependent and independent pronouns. He used the dependent first-person subject pronoun only once, which makes its appearance insignificant. It is worth noting that the child used the pronoun

[ʔana] (first-person singular subject) instead of the first-person singular ablative pronoun to show possessiveness in the sentence [hada mai ʔana] instead of /hadi mai ʔili/ *this water is mine*.

The most apparent increase was that of the referring nouns type. These nouns constituted the lion's share of the child's lexicon development compared to his nouns in stage 1. He specifically used more object referring nouns. The number of food, as well as furniture-referring nouns, doubled in this stage. This increase can be attributed to both the meaningfulness and the ease of the observability of the referents they denote. More clothes referring nouns also appeared, and stability in the use of abstract, animals and places referring nouns was detected. Appliances referring nouns started to appear in the child's production for the first time, with terms such as [kɔmpju:tə] *computer*, [telɛfɔ:n] *telephone*, and [tɛlɪzjɔ:n] *television* emerging by virtue of their importance in the child's world.

5.2.2. English

Throughout the second stage, the child's English vocabulary expanded to 538 word tokens: 3 were proper names (only 0.5%), 14 were pronouns (2.9%), 9 were kinship expressions (1.6%), and 246 were referring nouns (45.7%). The child's total English word types reached 240 at this stage and his MLU_M rose from 0.8 to 2.4, thus placing him in Brown's (1973) second stage. Table 8 illustrates this in detail:

Table 8. *The Child's Production of English Referring Terms — Stage 2*

Total Word Tokens: 538
Proper Names (3) ¹ [3] ²
Kinship Relation Terms (9) [3]
Referring Noun Phrases (246)
Clothes (11) [3]
Objects (65) [16]
Food items (51) [15]
Abstract Referents (18) [5]
Furniture (14) [5]
Animals (48) [17]
People and Body Parts (17) [4]
Places (18) [7]
Appliances (4) [1]
Personal Pronouns (14) [5]
Total Word Types: 240

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Although the child's English production doubled in this stage compared to his English production in stage 1, this doubling did not cause any significant development of the target expressions except for the referring noun. The pronoun [you] scored 11 occurrences, and it was used as an object in four main formulaic chunks (i.e., [thank you], [love you], and [see you later]). The pronoun [you] was used only once as an ablative in [happy to you] instead of *happy birthday to you*. This occurrence of [you] in [happy to you] occurred as an unanalyzed phrase when the child was trying to express his feelings about having his birthday party. He also used it in another utterance when he said [It's happy to you for Yanal, mom. Ok?]. Pine and Lieven (1993) opine that the production of such unanalyzed phrases acts as a facilitator that helps the child to move from the one-word stage into the multiword stage.

The sense of possessiveness was witnessed for the first time on two occasions in [yours] and [mummy's]. The possessive adjective pronoun [my] was also used for the first time in this stage. However, considering that each of these pronouns was used only once, we cannot conclude that the child had acquired them. Self-referring pronouns had not appeared yet in the child's English repertoire; he still used his proper name to refer to himself.

Once again, the child's proportion of English referring nouns outnumbered his Arabic production of the same category. Object and food referring nouns scored the highest occurrences because they are easier to relate to real entities in the child's world and because of their importance in his daily life. Qualitative development of new clothes, animals and place-referring nouns was also detected in the child's data. His furniture-referring nouns doubled, whereas no significant increase was witnessed in the abstract-referring nouns and appliances referring nouns. It is worth noting that the plural forms [cars], [apples], [numbers], [colours] and [buses] each occurred once. This can be considered as the

beginning of the child's realisation of the pluralisation process and starting to apply the rule. However, the fact that each was used only once undermines this assumption.

In short, even though the child's vocabulary system had doubled, his target referential expressions were stable for almost all of the categories. No much change was witnessed in the use of kinship terms or pronouns in both languages. The only apparent increase was in the child's production of both English and Arabic referring nouns. It is obvious that the child's Arabic lexicon was richer than his English as far as pronouns and kinship terms are concerned; however, his use of English referring nouns witnessed a steep rise in this stage. This can be attributed to the fact that the child was practicing his English through playing games and reading picture books with his mother.

5.3. Stage 3 (Ages 2;7 to 2;10)

In this stage, the child's English production started to overtake his Arabic production because of changes in the child's family situation. His grandmother returned to Jordan and the child attended a British nursery where he spent many hours exposed to British English on a daily basis. This is reflected in the significant expansion of his vocabulary system in English. However, his Arabic vocabulary system lagged behind.

5.3.1. Arabic

The child's total Arabic tokens decreased from 773 in stage 2 to 305 in stage 3: 21 were pronouns (6.8%), and only 1 proper name (0.6%), which was his name, appeared twice in the data of this stage. As for kinship terms, only 13 were used (4%) and only 57 tokens were referring nouns (18.6%). The child's Arabic word types totalled 203. Subsequently, his Arabic MLU_M rose to 2.9 to place him in Brown's (1973) third stage. The child's proportion of the target expressions is illustrated in Table 9:

Table 9. *The Child's Production of Arabic Referring Terms — Stage 3*

Total Word Tokens: 305
Proper Names (2) ¹ [1] ²
Kinship Relation Terms (13) [3]
Referring Noun Phrases (57)
Clothes (12) [4]
Objects (6) [2]
Food items (5) [2]
Abstract Referents (10) [4]
Furniture (5) [2]
Animals (8) [4]
People and Body Parts (0)
Places (9) [3]
Appliances (2) [1]
Personal Pronouns (21) [5]
Total Word Types: 203

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Table 9 shows how the child's Arabic lexicon production reduced at this stage—limited referring expressions appeared in his Arabic language, new terms were produced and some previously produced terms disappeared. No newly used pronouns emerged here, except for the pronoun that expresses genitive [-o] as in [beito] for *his home* as well as the pronoun [-i] as in [faʕri] for *my hair*. Some of the referring nouns he had used in the previous stage still appeared in this stage. However, very few new nouns appeared and many disappeared. [biʒama] *pyjama*, [ri:ha] *perfume*, and [hommos] *hummus* were used for the first time. In fact, [hommos] *hummus* was used only once in stage 2. The term [walaʔiʔi], an equivalent of *nothing*, appeared in three different contexts. The abstract notion 'time' was expressed by using [mbareh] and [bukra] for the words *yesterday* and *tomorrow*, respectively. This can be considered as a threshold of the awareness of abstractness and the beginning of using expressive nouns with abstract referents in proper contextual phrases. However, it is important to take note of how the child's Arabic production had weakened in this stage compared to his English production.

5.3.2. English

In this stage, the child's English lexicon was enriched with English expressions because of the new social situation he was living through. His English word tokens totalled 889: 27 were proper names (3%), 12 were kinship expressions (1.3%), 105 were pronouns (11.8%), and 261 were referring nouns (29%). His word types totalled 264. The child's English MLU_M rose from 2.4 to 3.5, exceeding Brown's (1973) third stage and placing him in stage 4. Table 10 illustrates the child's production of English referring terms:

Table 10. *The Child's Production of English Referring Terms — Stage 3*

Total Word Tokens: 889
Proper Names (27) ¹ [12] ²
Kinship Relation Terms (12) [3]
Referring Noun Phrases (261)
Clothes (11) [3]
Objects (67) [17]
Food items (32) [9]
Abstract Referents (27) [10]
Furniture (15) [4]
Animals (36) [10]
People and Body Parts (29) [9]
Places (46) [13]
Appliances (9) [3]
Personal Pronouns (105) [13]
Total Word Types: 264

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Compared to the second stage, more proper names appeared in this stage to either address or talk about his new friends at the nursery. Such names were repeatedly uttered while the child was playing at home. He also used his friends' proper names when narrating to his mother everything he had experienced during his nursery day.

In this stage, a very significant development was witnessed in the child's usage of English pronouns. The child started using pronouns to refer to himself and to others. First-person singular pronouns, with all their cases, can be said to have been acquired perfectly well. *I*, *me*, *my*, and *mine* were used communicatively in contextual situations. This early appearance of all grammatical cases of first-person singular pronouns is consistent with Qi's (2005) research in that all cases of first-person singular pronouns appeared in the third phase; however, in Qi's (2005) study, their appearance took place after the age of three. The second-person singular pronouns also appeared at this stage, with all its cases but less frequently compared to first-person singular. This reveals the child's priority of self-referring (speaker) compared to referring to the hearer. Among the third-person pronouns, *it*, in both its subjective and objective cases, was used the most. The child used this pronoun to refer to a toy, a book, a flower, a cat, a dog, or even the weather in [it's raining]. The pronoun *they* occurred only twice to refer to his toys. At this early stage of acquisition, the child also managed to use the genitive [-'s] to refer to Lucy's car [this is Lucy's], Sophie's car, and mummy's book. Because these genitive forms occurred repeatedly and in meaningful contexts, one can consider their emergence as the starting point of acquiring the genitive case.

Referring nouns made up most of the child's target terms. Many new expressions were used at this age, and the number of nouns used to refer to concrete objects outnumbered the other categories of referring nouns—they formed 25% of the 261 referring nouns. This excessive use of nouns with concrete objects is attributed to both the ease of observability and the meaningfulness of their referents. Place-referring nouns and nouns related to places such as *window*, *door*, *ceiling*, *floor*, *park*, *town*, and the like came next as they formed 17.6% of the total referring nouns. *Park* and *mall* scored the highest among nouns in this category because of their perceived importance to the child. Animal-referring nouns followed with a percentage of 13.7%, and nouns referring to people and parts of the human body, such as *head*, *hair*, *mouth*, *foot*, and the like scored 11% of the total referring nouns. Nouns referring to abstract entities, such as *tomorrow*, *fun*, *nothing*,

and *music* also scored 11% of the total referring nouns. Nouns referring to appliances scored the lowest percentage because of their lack of importance in the child's world.

In sum, referring nouns in English scored the highest ratio, whereas Arabic pronouns scored the highest ratio. It is worth mentioning that, at this stage, the child changed his attitude toward his preferred language and started using English while playing with his toys, talking to his parents, chanting nursery rhymes and living his daily life. This explains why his English lexicon expanded to the extent that it overtook his Arabic.

5.4. Stage 4 (Ages 2;11 to 3;4)

Although the child's Arabic production slightly increased and reached 497 word tokens, his English production, in comparison, shot up to reach 5,586 tokens.

5.4.1. Arabic

It is true that the child's Arabic production increased insignificantly compared to his English production in stage 4; however, this increase is quantitative, rather than qualitative. That is to say, that very few new Arabic terms emerged throughout this stage because of the dominance of his English over Arabic. His Arabic word tokens totalled 497 and his Arabic word types were 260. Fifty-one of the 497 tokens were pronouns (10%), 13 were kinship terms (2.6%), 5 were proper names (only 1%), and 52 were referring nouns (10.4%). His Arabic production exhibited an MLU_M of 3.9, which placed him in Brown's (1973) stage 4. Table 11 illustrates these occurrences:

Table 11. *The Child's Production of Arabic Referring Terms — Stage 4*

Total Word Tokens: 497
Proper Names (5) ¹ [2] ²
Kinship Relation Terms (13) [3]
Referring Noun Phrases (52)
Clothes (4) [2]
Objects (2) [2]
Food items (19) [6]
Abstract Referents (16) [5]
Furniture (0)
Animals (0)
People and Body Parts (0)
Places (10) [3]
Appliances (0)
Personal Pronouns (51) [9]
Total Word Types: 260

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

As shown in Table 11, no significant development took place in the child's Arabic lexicon at this age stage. Stability was observed in kinship terms and very few new dependent pronouns were detected in his speech. The second-person singular masculine ablative [-k] was used four times (as in [raħat ʕale:k baba] *you missed it daddy*), the second-person singular feminine ablative [-ki] was used only once and the third-person singular feminine object [-ha] was used four times to refer to his toys as in [ʕmelha] *fix it*. In addition, the independent pronoun [ʔinta] *you* (addressing his father) was used more often than [ʔinti] *you* (addressing his mother). The former recorded five instances, whereas the latter recorded only one instance. Finally, the self-referring subjective pronoun [ʔana] was used the most.

Less occurrences of referring nouns occurred in this stage compared to stage 3. Terms such as [dawa] *medicine*, [ʕa:j] *tea*, [naʕnaʕ] *mint*, [ħali:b] *milk*, [maj] *water*, and [ʔakil] *food* were used for the first time signifying the child's awareness of the meaningfulness as well as the ease of observability of their referents. Quantifiers that have tricky referents like [walaʔa] *nothing* and [ʔiʕi] *something* were also used for the first time, whereas nouns with abstract referents like [lle:l] *night* and [marra] *once* were used for the first time. As for nouns denoting places, the only new term that appeared was [barra] *out*. The child used this [barra] term whenever he wanted to go play out. The emergence of this term can be attributed to the importance of playing out in the child's small world. The other two terms with place referents

were [zamʕa] *university* and [مـاـنـة] *work*. These are places that the child's mother and father went to daily. Overall, as it can be seen, there was no much change in the child's Arabic language in this stage.

5.4.2. English

In contrast to the status of the child's Arabic language, the child's English language developed tremendously both quantitatively and qualitatively. His total word tokens reached 5,586, whereas his total word types reached 679. Out of the 5,586 word tokens, 109 were kinship relation terms (1.9%), 97 were proper names (1.7%), 730 were referring nouns (13%), and 971 were pronouns (17%). The child's English MLU_M rose from 3.5 to 4.8, which is a clear indication that he was beyond Brown's (1973) fifth stage. Table 12 gives further details:

Table 12. *The Child's Production of English Referring Terms — Stage 4*

Total Word Tokens: 5586
Proper Names (27) ¹ [12] ²
Kinship Relation Terms (109) [4]
Referring Noun Phrases (730)
Clothes (24) [7]
Objects (194) [31]
Food items (84) [17]
Abstract Referents (190) [35]
Furniture (10) [3]
Animals (28) [7]
People and Body Parts (115) [23]
Places (48) [23]
Appliances (5) [2]
Personal Pronouns (971) [19]
Total Word Types: 679

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

Table 12 illustrates how the child's English production improved in this stage. The child's lexicon was enriched with proper names of cartoon figures, which were produced while the child was playing with his cartoon characters. His social life also expanded to include relations with children of Jordanian families living in the U.K. as well as British children in the day care nursery he attended and British family friends. These wide social relations helped in increasing the child's opportunities for using proper names to socialize.

Terms such as [mom] and/or [mummy] appeared more often than other kinship terms. [Auntie] was now being used to not only address his female relatives but also to address other Jordanian and/or British women. He also used the term to address his carers in the school nursery. In this stage, two main categories significantly developed in the child's English lexicon: pronouns and referring nouns.

As for pronouns, the second-person plural pronouns and third-person singular feminine and masculine pronouns appeared for the first time at this stage. His self-referring pronoun [I] was used more often than the other pronouns. The pronoun [me] occurred 85 times, 22 of which appeared as objects of prepositions such as *on*, *like*, *at*, *to* and *for*, and 13 of the 24 occurrences of the second-person object pronoun [you] were used as objects of prepositions such as *for* and *to*. In addition, two of the 98 occurrences of the object pronoun [it] were used as objects of prepositions such as *about* and *in*, and all the 13 occurrences of [us] were used in [let's]. It was observed that some pronouns were mistakenly used instead of others. For instance, three of the 85 occurrences of [me] were used in the place of [I] as in [Dad and me]. There was only 1 instance, out of the 6 occurrences, where the pronoun [she] was used instead of [it] to refer to a car toy. Referring nouns scored the second highest occurrences among the other target terms. Many new lexical items appeared to refer to either concrete or abstract entities, and very complicated terms, such as quantifiers with tricky referents and new terms with abstract meaning, also appeared. In addition, time expressions were added to the child's lexicon, and very few terms were used in formulaic expressions. For instance, the term *goodness* appeared three times in [goodness me], the term *dear* appeared in three times in [oh, dear me], and the term *God* appeared four times to express the child's

disappointment in [oh God]. One can detect the child's awareness of his feelings and his ability to express them through such idiomatic expressions. This use of formulaic or unanalyzed phrases to facilitate the transition from single or simple word phrases to multiword utterances has been attested by Pine and Lieven (1993). New terms denoting new places were also recorded, and they were all used in relevant situations. Terms such as *stop*, *station*, *gate*, *bridge*, *people*, *driver*, and *tunnel* were used while playing with his toys. The substitution pronoun *one* was used very often to replace nouns. A quantitative as well as a qualitative increase in the use of quantifiers with tricky referents was also witnessed. Some examples of the quantifiers used are *something*, *nobody*, *everything*, *nowhere*, and *everybody*. Party terms like *party*, *birthday*, *presents*, *crackers*, *cake*, *candle*, *fun*, and *surprise* were also used when retelling a story about a birthday party. It is clear that his English vocabulary system was developing rapidly, whereas his Arabic vocabulary system remained stable.

5.5. Stage 5 (Ages 3;5 to 3;9)

The child's English syntactic structure grew steadily compared to his Arabic syntactic structure. His English sentences were becoming more complex than those in previous stages, and his English vocabulary lexicon expanded at the expense of the Arabic vocabulary lexicon.

5.5.1. Arabic

In this stage, the child's Arabic production shrank remarkably. His Arabic word tokens were only 120 and his Arabic word types were 90. Five of the 120 word tokens were proper names (4%), 11 were kinship relation expressions (9%), 6 were pronouns (5%), and 25 were referring nouns (16.6%). The child's Arabic MLU_M reduced from 3.9 to 2.2, which took him back to Brown's second stage. Table 13 illustrates these occurrences:

Table 13. *The Child's Production of Arabic Referring Terms — Stage 5*

Total Word Tokens: 120
Proper Names (5) ¹ [3] ²
Kinship Relation Terms (11) [3]
Referring Noun Phrases (25)
Clothes (4) [2]
Objects (5) [2]
Food items (3) [1]
Abstract Referents (0)
Furniture (2) [1]
Animals (5) [2]
People and Body Parts (4) [1]
Places (0)
Appliances (2) [1]
Personal Pronouns (6) [3]
Total Word Types: 90

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

As inferred from Table 13, very few occurrences of kinship terms were witnessed in Arabic. Three of the six pronouns were the self-referring pronoun [ʔana]; one of the six pronouns was the dependent [-i] attached to the word [laħal], which is equivalent to *by myself*; and two of the six pronouns were [-i], which was used to indicate genitive as in [ʔiʔri] *my feet*. Even though the referring nouns scored the highest number of occurrences, a very insignificant appearance of new nouns was recorded in the child's production at this stage.

5.5.2. English

In this stage, the child's English presented a different picture. His total English word tokens rose to 5,658 with a total of 786 word types: 87 of the total tokens were proper names (1.5%), 75 were kinship relation terms (1.3%), 1,151 were pronouns with a vast variety of cases (20%), and 495 were referring nouns (8.7%). The child's English MLU_M exhibited a rise from 4.8 to 5.3, consistently exceeding Brown's (1973) fifth stage. Table 14 illustrates these occurrences:

Table 14. *The Child's Production of English Referring Terms — Stage 5*

Total Word Tokens: 5658
Proper Names (87) ¹ [25] ²
Kinship Relation Terms (75) [4]
Referring Noun Phrases (495)
Clothes (16) [6]
Objects (113) [25]
Food items (67) [17]
Abstract Referents (126) [29]
Furniture (20) [5]
Animals (28) [9]
People and Body Parts (102) [14]
Places (22) [8]
Appliances (6) [2]
Personal Pronouns (1150) [27]
Total Word Types: 786

1-Numbers in parentheses are word tokens

2-Numbers in squared brackets are word types

As inferred from Table 14, the child's English lexicon expanded to include new terms of kinship relations, personal pronouns and referring nouns. New proper names, which were used communicatively, were added to the child's vocabulary list. New names of cartoon characters appeared. New names of new friends also appeared. This increase in proper names in the child's production can be attributed to the widening of his social circle to include more British friends.

A new list of self-referential pronouns like *herself*, *himself*, *itself*, *themselves*, and *ourselves* appeared for the first time in this stage. The self-referential pronoun *ourselves* was occasionally used in its singular form [ourselves]. In addition, two erroneous appearances of *themselves* occurred. On the first occasion, it was produced as [theirselves] and on the second occasion it was produced as [themself]. The possessive pronoun [mine] reoccurred 14 times and the possessive adjective pronoun [their] appeared for the first time.

A qualitative increase in the child's referring nouns was also witnessed. A reasonable number of new referring nouns denoting clothes, objects, food items, animals, people and abstract entities was recorded, and many semantically complex quantifiers denoting places, things, and people were added to the child's lexicon. More expressions denoting time were also recorded, with terms such as *Friday*, *Sunday*, *Thursday*, *Tuesday*, and *Wednesday* appearing for the first time. The dominance of the child's English language over his Arabic was obvious from the percentages.

6. Comparative Analysis of Findings

The early noun advantage phenomenon, which has been attested by many studies (e.g., Gentner & Boroditsky, 2001; Macnamara, 1982; Nelson, Hampson, 1993; Qi, 2005; Steinberg & Sciarini, 2006; Woodward & Markman, 1998) was also found to be true in this study. In the present study, concrete noun phrases and proper names and nouns of kinship relations appeared earlier than the other categories of nouns and earlier than pronouns, whereas abstract nouns and nouns of little importance and/or of little meaningfulness in the child's world appeared at later stages. These two phenomena were also attested by Steinberg and Sciarini (2006) and they are evident in the child's two languages, even though the dominance of one language over the other changed in different stages depending on the child's social situation.

As for the development of the pronominal systems, several studies have explored the acquisition of English pronouns (e.g., Cruttenden, 1977; Morgenstern, 2012; Rispoli, 2005; Waterman & Shatz, 1982). Owens (2008) provided an approximate timeline for the acquisition of personal pronouns. However, the sequence in which Arabic and English pronoun systems occurred in this study is partially parallel to the one suggested by Owens. Throughout the first stage, the child had no personal pronouns to refer to either himself or to others in English, except for the pronoun *you*. He instead used his own name as a self-referring expression. Children's tendency to use their proper names to refer to themselves has been well documented in other studies (e.g., Chiat, 1986; Qi, 2005; Tanz, 1980). The child also used proper names and kinship relation terms to refer to others.

However, in Arabic, he started using personal pronouns at an early stage in spite of the complexity of the Arabic pronoun system. His early use of Arabic personal pronouns to refer to himself and others is explained by the person-role hypothesis, which attributes this to the child being verbally expressive and using Arabic as his preferred language. The English pronoun *you* also emerged at the same early age-stage and its use is interpreted by the same hypothesis, which holds that his role as a listener, rather than a speaker, in English contexts contributed to its production.

Table 15 summarizes the development of the child's English and Arabic pronoun systems throughout the five stages. It also provides the reader with a comparison between the child's English pronoun productions and the sequence synthesised by Owens (2008):

Table 15. *The Child's English and Arabic Pronouns Development*

Age/Stage	English		Arabic
	This Child's Timeline	Owens's Timeline	
1;7-2;2 Stage 1	<i>you</i> second-person object	<i>I, it</i> subjective/objective	first-person subject first-person/object (dependent) first-person/ablative (dependent) third-person/F/object (dependent) third-person/M/object (dependent)
2;3-2;5 Stage 2	<i>you</i> ablative	<i>my, me, mine, you</i>	third-person/F/ablative (dependent)
2;6-2;8 Stage 3	<i>I, me, my, mine</i> <i>you</i> subject <i>yours, your</i> <i>it</i> subjective/objective/ablative <i>myself</i>	<i>your, she, he, yours, we</i>	third-person M ablative (dependent) second-person M subject
2;9-3;3 Stage 4	<i>she, her</i> <i>he, his, him</i> <i>we, us, our</i> <i>them</i> <i>their</i>	<i>they, us, hers, his, them, her</i>	second-person M/ablative (dependent) second-person M subject
3;4-3;8 Stage 5	<i>yourself, themselves, himself,</i> <i>ourselves, herself</i>	<i>its, our, him, myself, yourself, ours,</i> <i>their, theirs</i>	first-person genitive (dependent)
3;9+		<i>herself, himself, itself, ourselves,</i> <i>yourselves, themselves</i>	

Table 15 illustrates the similarities and differences between the acquisition of pronouns found in this study and Owens' (2008) rate of acquiring pronouns. It is clear that the child's simple English pronominal system did not start developing until when English started overtaking his Arabic. The Arabic first-person pronoun and third-person singular feminine pronoun appeared in the first stage. These are equivalent to *I* and *it* in English and this progress is consistent with the timeline introduced by Owens (2008) for English pronouns. The fact that the child started with the pronoun *you* instead of *I* is an indicator of his status of being a listener, rather than a speaker, of English during the early stage. Nothing much can be added about the production of the Arabic pronouns because they developed slowly and inconsistently. The English pronouns *me, my, and mine* appeared later than 2;5, which concurs with Owens' (2008) timeline—they appeared in stage 3 at the ages of 2;6-2;8. The pronoun *it* also appeared at this stage instead of the timeline suggested by Owens (2008). The partial consistency of the child's production of the rest of the pronouns with Owens' (2008) suggested timeline is also clear. For instance, a delay is witnessed in the production of some English pronouns in stage 1. This delay can be attributed to the fact that this child was bilingual in contrast to monolingual children whose development was investigated in the literature.

7. Conclusion

This study traced the developmental path of the nominal and pronominal systems of two genetically different languages in the production of a bilingual child. The results revealed that the child's English as well as Arabic lexicons

developed as predicted by the semantic complexity hypothesis, as well as the three psychological learning principles suggested by Steinberg and Sciarini (2006). The results reveal an early development of names and phrases for their semantic simplicity. Referring phrases emerged in an order shadowed by their priority in the child's world. What was meaningful and easily connected to their referents emerged before other referring terms in both languages. Concerning the pronoun systems, the results revealed that the Arabic pronouns were acquired earlier than the English pronouns, even though they are more complex and lack the distinctiveness of the sound signalling the referents because almost all are clitics that are difficult to perceive by young children.

Also, the results support that the person-role hypothesis fitted the child's production of the pronominal referring expressions. For instance, in the early stage, when the child acted the role of a speaker in Arabic, he first started using the first-person singular pronoun, but he used the second-person singular pronoun because of his role as a listener in English.

No incidents of pronoun reversal were detected in the child's data. This can be because the study was not particularly designed to investigate the connection between ToM and the acquisition of pronouns.

However, this study has one obvious limitation, which is the fact that the child's Arabic production was not appropriately traced because of the dominance of his English over his Arabic. This deprived the child new and creative opportunities in which Arabic could have been used. Therefore, this study recommends further research be conducted on monolingual children acquiring Arabic to provide further evidence on the applicability of the theories investigated in this study. In addition, this study recommends that further research particularly designed to investigate the relation between ToM and the acquisition of Arabic pronouns be conducted to provide further evidence on the correlation between ToM and pronoun reversal.

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Availability of Data

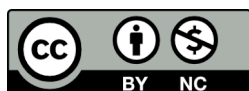
The author started recording her son when he was 1 year and 5 months. Some data used in this study may have been used in the analysis of other studies by the same author.

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