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## **Diminutive *-i* in Early Child Hebrew: An Initial Analysis**

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### **I Introduction**

The first morphological markers to emerge in Hebrew are inflectional markers of gender and number (Berman & Armon-Lotem, 1997; Berman, 1985; Ravid, in press). At the same time, around age two, children's speech displays a single marker which may be considered derivational, the diminutive suffix *-i* as in *xatʔli* 'cat,DIM', *masaʔti* 'truck,DIM'. This paper presents an initial analysis of diminutive *-i* in early child Hebrew. I am grateful to Ruth A. Berman and Sigal Uziel-Karl from Tel Aviv University for making available to me the transcripts of four of the children (Hagar, Leor Lior and Smadar) whose diminutive forms are analyzed here. Transcription of these data was helped by funding to Ruth A. Berman from the Child Language Data Exchange System, Carnegie-Mellon University, Pittsburgh, PA, and from the Max-Planck Institute for

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## II Diminutive devices in Hebrew

Diminutive forms in Hebrew derive from two sources. One is foreign borrowing, mainly from languages with dominant diminutive systems such as Russian, Yiddish and Judeo-Spanish (Sagi, 1997). Foreign-suffixed diminutives take both non-native and native bases, for example Russian *-chik* (e.g., foreign-based *ponchik* 'doughnut, DIM [baby's nickname]', native-based *š amenchik* 'fat, DIM') and Judeo-Spanish *-okɔ* (e.g., native-based *kofɔko* 'monkey, DIM') (Avineri, 1964; Bolozky, 1994). The main function of these loan diminutives is to express familiarity, informality and endearment in child-directed and child-centered speech (Dressler & Merlini-Barbaresi, 1994; Stephany, 1997). They are not, however, productive beyond certain frozen forms (e.g., *š amenchik* 'fat, DIM' is an extant word but *\*razechik* is impossible<sup>1</sup>); and are moreover restricted within the ethnic groups that make up Israeli society.

### *Suffixation*

Hebrew also has native diminutive forms with the general meaning of "smallness" rather than endearment. These fall into two structural classes: suffixed stems and reduplication (Avineri, 1964). There are two productive diminutive suffixes in Hebrew: Feminine *-it<sup>2</sup>* (e.g., *sak / sakit* 'sack / plastic bag') and masculine *-on* (e.g., *gʻš er / giš ron* 'bridge / little bridge'). Both of them linearly attach to given noun and adjective bases. Many of the forms

created by the attachment of these suffixes predictably and transparently express a smaller object or a lesser amount of the property, e.g., *pax / paxit* ‘bin / small can’, *mapa / mapit* ‘tablecloth / napkin’; *dʿgel / diglon* ‘flag / small flag’; or a deprecatory, informal, familiar sense, e.g., *tipeš / tipšon* ‘fool / little fool’ (compare Dressler & Merlini-Barbaresi, 1994; Stephany, 1997). However, two facts indicate that *-on* and *-it* go beyond mere depreciation in amount, formality or seriousness, and are clearly derivational in nature: One is the fact that they both serve numerous semantic purposes, such as indicating instruments (*xalal / xalalit* ‘space / spaceship’, *mexona / mexonit* ‘machine / car’, *safa / sfaton* ‘lip / lipstick’, *tiyul / tiyulon* ‘stroll / stroller’), as well as other meanings such as collective nouns and periodicals. Both are, in fact, the two most productive suffixes in Hebrew (Nir, 1993). Secondly, note the unpredictable meanings of diminutivized nouns in Table 1, taken from Bolozky (1994) and Nir (1993). They all share the feature of ‘smaller than the base form’, but their meanings are far from the simplex ‘small [base]’:

Table 1: Nouns suffixed by diminutive *-it* and *-on*

Base form	Gloss	Base + suffix	Gloss
		<u><i>-it</i></u>	
<i>kaš</i>	straw	<i>kaš it</i>	drinking straw
<i>tav</i>	note	<i>tavit</i>	tag
<i>mapax</i>	bellow	<i>mapuxit</i>	harmonica
<i>aron</i>	cupboard, closet	<i>aronit</i>	locker
<i>kruv</i>	cabbage	<i>kruvit</i>	cauliflower
		<u><i>-on</i></u>	
<i>gan</i>	kindergarten	<i>ganon</i>	nursery school
<i>sahar</i>	moon	<i>saharon</i>	crescent moon
<i>pakid</i>	clerk	<i>pkidon</i>	beaurocrat
<i>gag</i>	roof	<i>gagon</i>	roof-rack

*maxšev*                    computer                    *maxševon*                    pocket calculator

### *Reduplication*

Reduplication is a nonconcatenative morphological process in which some part of the base - consonants and vowels, syllables, morphemes, or the whole word - is repeated to the left, to the right, or inside the base, e.g., Agta *ulu / ululu* 'head/s'. It is a productive and varied process in many of the world's languages (Spencer, 1991: 150-156). In Hebrew, however, it is a minor<sup>3</sup> process in two senses: first, it differs from the major word-internal morphological processes - nonlinear and linear affixation - in that it uses material from the base itself as an extra morpheme instead of joining together two morphemes. Second, left-to-right reduplication is generally restricted in Hebrew to diminutive expression in nouns and adjectives<sup>4</sup>, e.g., *xatul / xataltul* 'cat / kitten', *sagol / sgalgal* 'purple / purplish' (Nir, 1993). It takes a variety of forms, including repeating the last stem consonant (compare *kal / kalil* 'light / very light'), none of which is really productive except for what is considered today a nominal pattern  $CCaC_1aC_1$  to be combined with an interdigitated consonantal skeleton e.g., *zkankan* 'sparse beard' from *zakan* 'beard' (Bolzky, 1994; Nir, 1993).

Bolzky (1994) and Sagi (1997) claim that the unmarked or default manner of forming novel diminutives in Modern Hebrew speech and literature is suffixation by *-on* or its feminine counterpart *-tenʔ*, e.g., *tipa / tipʔnet* 'drop / small drop', *dira / dirʔnet* 'apartment / small apartment'. According to Bolzky, *-on* / *-tenʔ* also serve to express affection or depreciation (*metuka / metukʔnet* 'sweet, Fm / little sweet'), as in other languages (1994:55).

### **III Diminutive formation in early childhood**

Dressler (1994) and Dressler & Karpf (1995) demonstrate that extragrammatical operations such as the formation of diminutives characterize early children's productions in the absence of morphological rules before the emergence of the morphological module. This is because child language relies at this stage on general cognitive rather than specifically grammatical knowledge. Support for this claim is found in analyses of the acquisition of a number of languages. Clark (1985:741) summarizes a variety of sources to show that children acquiring Romance languages are able to modify nouns by diminutive and augmentative suffixes early on, although it is only by age four and upwards that they are able to properly diminutivize nonce words. For English, Clark (1993:146-7) notes that diminutive *-ie* was one of the earliest suffixes to appear in the speech of Damon at 2;0. Describing the acquisition of Japanese, Clancy (1985:451) reports that "the earliest and by far the most common form of self-reference was nickname+*-chan*, the diminutive suffix".

It seems that children growing up in languages rich in diminutive devices acquire them early on. Recent evidence is provided in three studies on the acquisition of diminutives in three such diminutive-rich languages. Ceccherini, Bonifacio & Zocconi (1997) show that diminutive formation is one of the first morphological operations acquired by Sara in Italian, and that she uses a variety of diminutive suffixes productively before 2;4. Gillis (1997) shows a sporadic use of Dutch diminutives in the speech of Jolien from 1;7-2;0, and a steady 20% occurrence of diminutivized nouns from 2;1 onwards. And the Greek children Mairi and Spiros also use diminutives productively in the speech from age 1;9 onwards (Stephany, 1997).

Although diminutive formation in Hebrew is not as central, nor as rich and varied as in some of these languages, diminutive devices constitute an established and well-documented part of Modern Hebrew morphology in both speech and literary expression (Sagi, 1997). Moreover, the two structures which express diminutives in Hebrew - linear suffixation and

reduplication - are expected to be accessible to children early on; reduplicated syllables are typical of “baby talk” (Berman, 1985), while Israeli children are initially able to access linear affixation before non-linear formation (Berman, 1995). This paper presents an initial attempt to find out which diminutive device is favored by children acquiring Hebrew.

#### **IV The data**

Data from eight normally developing, native Hebrew-speaking children was surveyed for this study: Matan (M) and Doron (F), dizygotic twins (aged 1;11-2;05) (see Ravid, in press for details); Hagar (F) (1;07-3;03); Leor (M) (1;09-3;0); Lior (F) 1;05-3;01); Sahar (1;02-1;05); Sivan (F) (1;11-5;06); and Smadar (F) (1;06-2;04).

##### *Matan and Doron (1;11-2;05)*

The first analysis was performed on the production data of the twins Matan and Doron. A total of 1476 utterances was recorded in 12 sessions every two weeks for 6 months. Table 2 lists every diminutive type<sup>5</sup> which appeared at least once in each of the 12 recordings, with MLU and number of utterances per recording session.

The majority of the 21 diminutive forms in Doron and Matan’s speech do not appear in the Hebrew structural inventory described in Bolozky (1994). They are all - except for four - suffixed by *-i*. There are 7 diminutive noun types in Doron’s recordings, and 14 in Matan’s. Of these, three are shared by both children: the children’s names and their older sister

<u>Age</u>	<u>MLU &amp; # Utterances</u>	<u>Doron</u>		<u>MLU &amp; # Utterances</u>	<u>Matan</u>	
		Types	Gloss		Types	Gloss
1;11.05	1.17 (N=29)	<i>do'ḡni</i> <i>puzi</i>	Doroni Puzi (the cat)	1.49 (N=61)		
1;11.24	1.24 (N=22)	<i>do'ḡni</i> <i>tṛli (=xatṛli)</i>	Doroni cat,DIM	1.40 (N=78)	<i>eṛti</i> <i>atṛni</i>	Re'uti Matani
2;00.07	1.20 (N=37)	<i>atṛli (=xatṛli)</i> <i>do'ḡni</i>	cat,DIM Doroni	1.49 (N=60)	<i>do'ḡni</i> <i>atṛni</i> <i>os'si (=moceci)</i> <i>dandu</i>	Doroni Matani pacifier,DIM Dandush (=Doron)
2;00.21	1.31 (N=35)			1.72 (N=98)	<i>s'si (=moceci)</i> <i>atṛni</i>	pacifier,DIM Matani
2;01.05	1.67 (N=42)	<i>atṛni</i> <i>do'ḡni</i>	Matani Doroni	1.41 (N=50)	<i>do'ḡni</i> <i>tato'on</i> 'traktoron'	Doroni desert buggy =tractor,DIM
2;01.19	1.92 (N=35)	<i>do'ḡni</i>	Doroni	1.95 (N=83)	<i>xipu</i> <i>mos'si (= moceci)</i> <i>masaṽti</i>	beetle,DIM pacifier,DIM truck,DIM

<u>Age</u>	<u>MLU &amp; # Utterances</u>	<u>Doron</u>		<u>MLU &amp; # Utterances</u>	<u>Matan</u>	
		Types	Gloss		Types	Gloss
2;02.03	1.66 (N=44)	<i>do'ḥni</i> <i>xatḥli</i>	Doroni kitten	1.93 (N=83)	<i>do'niḥ</i> <i>dḥbi</i>	Doroni teddy
2;02.17	2.24 (N=51)	<i>do'ḥni</i> <i>ḥti</i>	Doroni Re'uti	1.86 (N=76)	<i>do'ḥni</i>	Doroni
2;03.10	2.44 (N=61)	<i>matḥni</i> <i>bibi</i>	Matani Bibi (teddy)	2.28 (N=80)	<i>eḥti</i> 'Re'ḥti'	
2;04.00	2.25 (N=67)			2.04 (N=91)	<i>kneydale</i>	dumpling
2;04.14	2.30 (N=93)			2.00 (N=58)		
2;04.27	2.30 (N=81)	<i>makḥti bum</i>	blow,DIM	2.00 (N=61)	<i>sakḥti</i> <i>Chinchu ha-xamudi</i> <i>Dinda</i>	plastic bag,DIM Chinchu (Matan) the-sweety,DIM Dinda (Doron)

Table 2: Diminutive forms in Matan and Doron's speech

(Re'ut). The twins' diminutive inventory consists of three *i*-classes: One is self- and kin-endearing reference (e.g., *Doroni*, *Re'uti*), common in both Hebrew child-directed and child-centered speech and used extensively by adults participating in the conversation. However, caregivers address the children using foreign and reduplicated diminutive forms to which the twins react appropriately but do not use to refer to themselves except in the last recording, e.g., *Matanchuk*, *Chinchuk*, *Dindush*, *Dindale*, *Doronik*, *Doronile*. The parents also address the children using hypocoristic forms and expose them to forms with other diminutive suffixes which are not repeated by the children, e.g. *metukʔnet* 'sweety,DIM,Fm' from *metuka* 'sweet,Fm', *katanchik* 'little,DIM', and Yiddish *pickale* 'tiny one'. A second type of diminutives in the twins' speech includes frozen and semi-frozen forms such as *dubi* 'teddy' from *dov* 'bear', *xatuli* 'cat,DIM', *moceci* 'pacifier,DIM' (compare Gillis, 1997). Of these, the only non-*i*-suffixed forms are rote-learned "frozen" *traktoron* 'desert buggy', from *traktor* 'tractor' suffixed by *-on*, and Yiddish *kneydale* 'dumpling'. The third class of truly productive *-i* diminutives appears spontaneously in Matan's speech at age 2;01 and 2;04 respectively. In all three cases, he attaches the suffix to nouns already suffixed by *-it*: *masaiti* 'truck, DIM', *xipušiti* 'beetle,DIM', and *sakiti* 'plastic bag,DIM'. He also refers to himself in the last recording as *matanchuk ha-xamudi* 'Matan,DIM the-cute,DIM'. Doron has a single productive diminutive in her last recording: *makati bum* 'blow,DIM boom' from *maka* 'blow'. None of the productive diminutives occurs in the adults' child-directed speech: they use the conventional nondiminutivized forms *xipušit* 'beetle', *maka* 'blow', or else these forms do not occur at all in the caregivers' child-directed input.

Two tentative conclusions arise from the analysis of the twins' transcripts: One, that diminutives are available early on to young Hebrew-speaking children both as rote-learned forms as well as in spontaneous production; and that the early diminutive device in Hebrew is *-i*.

*Diminutives in the speech of Hagar, Leor, Lior, Sahar, Smadar and Sivan.*

The transcriptions of six additional children in the age range 1;02-3;03 were surveyed for diminutive forms.

*Hagar 1;07-3;03*. 37 diminutive types were counted in 35 recordings over 21 months. 34 of them were suffixed by *-i*, consisting of the same three classes observable in the twins' productions: (1) given names (*hagari, ruti, tami, šauli, bindi*), including toys, e.g., *leycani* 'clown,DIM'; (2) Frozen and semi-frozen diminutives, e.g., *dubi* 'teddy', *moceci* 'pacifier,DIM'; and (3) productive *i*-suffixed diminutives. Hagar uses diminutives productively from her first recording as evidenced by the spontaneous alternation between non-suffixed and suffixed forms in the following examples:

(1) Hagar 1;07

\*HAG: *yam, holxim le^yami*

%mor: N V P N,DIM

sea go,Prs,Pl,Imp to-sea,DIM

'Beach, we're going to the beach'

The word *yam* 'sea', in the meaning of 'seaside, beach', appears twice in the same utterance by the little girl overjoyed by the prospect of going to the beach, the second occurrence suffixed by *-i*.

In a recording made when Hagar was 2;01, the word *bakbuk* 'bottle' occurs in four consecutive utterances, with and without the suffix *-i*:

(2) Hagar 2;01

\*HAG: *ten ta^babuki [ : et ha^babbuki ]*

%mor: V P:ACC AR N,DIM

give,Msc the-bottle,DIM

'Give (me) the bottle'

\*HAG: *nafal ha^babbuk .*

%mor: V AR N

fell,Msc the-bottle

'The bottle has dropped'

\*HAG: *noisa [: ani roca] [\*] babbuki .*  
 %mor: PN V N,DIM  
 want,1st,Fm bottle,DIM  
 ‘I want the bottle’

\*HAG: *larim [:leharim] [\*] et ha^babbuk .*  
 %mor: V,Inf P:ACC AR N  
 to-pick up the bottle  
 ‘To pick up the bottle’

Hagar uses two non-*i* diminutives suffixed by *-on*: *xamudon* ‘cute,DIM’ (2;04) and *santeron* ‘chin,DIM’ (2;10). One foreign diminutive suffix *-chik* appears in her speech: *zanavchik* ‘tail,DIM’ (1;09). She also adds a double diminutive *-on, -i* to the childish *kaki* at 2;07: *kakiyoni* ‘kaki,DIM,DIM’. Hagar’s caregivers do not use either *xamudon* or *kakiyoni*: in the transcribed sessions she is the only one to produce them. Even her use of *santeron* ‘chin,DIM’ is not a simple repetition of a word she has just heard, as evidenced by the following dialogue between Hagar and her mother who is guiding her in drawing a picture of herself (free translation):

(3) Hagar 2;09

\*MOT: *axšav, tagidi li Hagari, ma yeš mitaxat la^, tistakli, ma yeš mitaxat la^pe?*  
 %mor Now tell me Hagar, what is there under the, look, what is there under the mouth?

\*HAG: *ma?*  
 What?

\*HAG: *santeron.*  
 chin,DIM.

\*MOT: *santeron, eyfo ha^santeron šel Hagari?*  
 Chin,DIM. Where’s Hagar,DIM’s chin,DIM?

\*HAG: *hine, po.*  
 There it is, here.

\*MOT: *tecyari.*  
 Draw.

\*MOT: *yofi, ze ha^santeron šel Hagari.*  
 This is Hagar,DIM’s chin,DIM

The rest of the dialogue makes it clear that Hagar’s mother makes regular use of the diminutive suffix *-on* in her child-directed speech:

\*MOT: *gam le Hagar yeš cavar?*

Does Hagar have a neck, too?  
 \*MOT: *as tecayri le Hagar et ha^cavar šel Hagar.*  
 So draw Hagar's neck.  
 %sit: HAG is drawing.  
 \*MOT: *eyx hu nir'a, ha^cavaron?*  
 How does it look, the neck,DIM?

While these *-on* diminutives may not be entirely productive in Hagar's speech, their occurrence in the data correlates with the child's early productive usage of *-i* compared with the twins, yielding forms such as *gamali* 'camel,DIM' alongside with *gamal* 'camel' (2;0) and *yanšufi* 'owl,DIM' (2;09).

*Leor 1;09-3;00.* Leor has few diminutive types in his productions, only 9 types in 34 recordings over 16 months, including the teddy and the predictable self-addressing as *Leori*. One notable exception is the occurrence of *xor* 'hole' as diminutive *xori* at age 2;07. However, Leor makes innovative and productive use of the colloquial Hebrew terms for grandparents: *safta* 'grandmother' and *saba* 'grandfather'. In the following examples, Leor alternately uses regular and diminutivized forms of 'granny': *safta* and *i*-suffixed *safti*, which is not at all a conventional way of referring to grandma in Hebrew:

(4) Leor, 2;0  
 \*LEO: *safti toridi* .  
 %mor: N,DIM V,Imp  
 granny,DIM take-down,Fm  
 'Granny, take (it) down'  
 \*LEO: *axat štayim ve safta ba* .  
 %mor: qn qn CONJ N V  
 one two and granny comes,Msc  
 'One two and granny is here'

(5) Leor, 2;05  
 \*LEO: *ima nas'a ba^oto šel sati* .  
 %mor: N V P&AR N P:POSS N,DIM  
 mummy went,Fm in-the-car of granny,DIM  
 'Mummy went in granny's car'

\*LEO: *safta yavi [: tavi] [\*] et ze la^hacaga* .  
 %mor: N V P:ACC PN:DEM P&AR N

granny will-bring,Msc Acc it to-the-show  
'Granny will bring it to the show'

Note that *safti* 'granny,DIM' is used only to refer to Leor's own grandma, rather than to other grandmothers. In the following examples from ages 2;07 and 2;08 respectively, Leor is referring to a grandmother's house in two contexts - his own grandmother, and to Red Riding Hood's grandmother:

(6) Leor, 2;06

\*LEO: *ze ba^bayt šel safti* .

%mor: PN:DEM P&AR N P:POSS N,DIM  
it in-the-house of granny,DIM  
'It's in granny's house'

\*LEO: *safta šoxevet ba^bayit* .

%mor: N V P&AR N  
granny lying,Fm in-the-house  
'Granny's lying down at home'

Leor sometimes refers to his grandfather as *saba* 'grandpa' and *sabi* 'grandpa,DIM', but most of the time he uses the term *sabiyon* or *saviyon*, which consists of the stem *saba* doubly suffixed by *-i* and *-on*<sup>6</sup>:

(7) Leor, 2;04

LEO: *loh laga'at safti ve doda Orly ve sabi, loh lingo [: laga'at] [\*],  
loh lingo [: laga'at] [\*]* .

%mor: NG V N,DIM CONJ N+N CONJ \$N \$NG \$V:ngi1 \$NG \$V:ngi1  
not to-touch granny,DIM and aunt Orly and grandpa,DIM, not to-touch, not  
to-touch.  
'Don't touch, Granny and aunt Orly and Grandpa, don't touch, don't touch'

(8) Leor, 2;07

\*LEO: *bo nikra le^sabiyon, boi tikrei le^sabiyon* .

%mor: V V P N,DIM V V P N,DIM  
come,Masc call,1st,Pl to-grandpa,DIM,DIM come,Fm call,2nd,Fm to-  
grandpa,DIM,DIM  
'Let's call grandpa, call grandpa'

\*LEO: *bo titen li yad nagid še saba loh ykax otxa, bo* .

%mor: V V PN&P N V sc N NG V PN&P:ACC V  
then come,Masc give,Masc to-me hand say,1st,Pl that grandpa not will-take  
you,Masc, come,Masc  
'So give me your hand, let's say that grandpa won't take you, come'

\*LEO: *boi sabyo* [: *Sabyon*] [\*] *ykax otanu* .  
 %lmor: V N,DIM V PN&P:ACC  
 come,Fm grandpa,DIM,DIM will-take us  
 ‘Come on, grandpa will take us’

\*LEO: *saba, Sabyon loh ykax otanu* .  
 %mor: N N,DIM NG V PN&P:ACC  
 grandpa, grandpa,DIM,DIM not will-take us  
 ‘Grandpa, grandpa won’t take us’

*Lior, 1;05-3;01*. Lior has 22 diminutive types in her vocabulary, recorded over a period of 19 months. As is already clear from the findings of the other children, most (16) of her diminutive forms are *-i*-suffixed, including children’s names (*luki, nican, har’eli*, but not herself), frozen and semi-frozen forms shared by all other children surveyed (*xamudi* ‘cute,DIM’, *bakbuki* ‘bottle’). Lior makes clearly innovative use of

*-i* in various forms. By age 2;01, she is able to alternate the regular and diminutivized forms of *xatul* ‘cat’:

(9) Lior, 2;01  
 \*LIO: *aval litgalech* [: *lehitagalech*] [\*] *xatuli* .  
 %mor: CONJ V N,DIM  
 but to-slide cat,DIM  
 ‘But slide, kitty!’

\*LIO: *hine xatul, hu šote šoko* .  
 %mor: ! N PRO V N  
 here cat, he drinks choco  
 ‘Here’s a cat, he’s drinking chocolate milk’

At the same time she attaches the suffix *-i* to the adjective *xam* ‘warm, hot’ and uses both *xam* and *xami*, an unconventional form which never appears in adult usage. By 2;02, Lior adds the suffix *-i* to the already diminutivized *dubon* ‘teddy’ (compare also *dubi*, both from *dov* ‘bear’<sup>7</sup>).

(10) Lior, 2;02

\*LIO: *doni duboni, yeš lo xerev* .  
 %mor: N:p N,DIM V PN&P N

doni teddy,DIM, has to-him sword  
'Donny the teddy, he's got a sword'

Lior has a particularly rich diminutive inventory for addressing and referring to her baby brother, Nitsan. She refers to him as *nican*, *nicani*, and also by a variety of minor foreign diminutive suffixes such as *-uš*, *-ku*:

(11) Lior, 2;05

\*LIO: *boxe, boxe ve ha^tinok Nicanuš* .

%lex: V V CONJ AR N,DIM  
crying, crying,Masc the-baby *nican*,DIM  
'Baby Nitsan is crying and crying'

(12) Lior, 2;08

\*LIO: *Nicanku eyn lexa yetušim Nican* .

%lex: N,DIM V PN&P N N,DIM  
*nican*,DIM not-have to-you,Masc mosquitoes, *nican*,DIM  
'Nitsan, there are no mosquitoes on you, Nitsan'

*Sahar, 1;02-1;05*. Sahar started talking around one year, and in the period covered in the available transcriptions his productions were mostly single words. Sahar's data provides a window on the early learning and use of *i*-diminutives by the child in interaction with his caregivers. In the four months of transcription surveyed, Sahar produced three diminutive types, all suffixed by *-i*, and all used by his caregivers: *bufi* (storybook character), *ami* (food and water), and *ituli* [*xituli*] 'diaper,DIM'. The first example is a conversation Sahar has with his father:

(13) Sahar, 1;2.12

\*ADI: *eyfo bufi ?*  
Q N,DIM  
'Where is Bufi?'

\*SAH: *bufi*.  
N,DIM  
'Bufi'

%sit: Sahar points at Bufi

\*ADI: *ta'ase tova le^bufi*.  
V N P N,DIM  
do petting to-bufi  
'Pet Bufi'

Sahar and his mother talk about his diaper:

(14) Sahar, 1;4.06

\*SAH: *ituli [xituli]*  
diaper,DIM

\*MEI: *xituli xituli meod ratuv.*  
Diaper,DIM, diaper,DIM very wet  
'Diaper, diaper is very wet'

In the next example, both Sahar and his mother use his generic word *ami* for food, in this case, a bagel (in other cases it was used for coffee and for a muffin):

(15) Sahar, 1;5.26 (free translation)

\*MEI: *xazarta ?*  
You're back?

\*SAH: *ken.*  
Yes

\*MEI: *hayita ecel aba ?*  
You were with Daddy?

\*SAH: *ami.*  
Food,DIM

\*MEI: *lakaxta et ha^ami šelxa ?*  
Did you take your food,DIM?

\*MEI: *bo elay.*  
Come to me

\*MEI: *le'an ata olex ?*  
Where are you going?

\*SAH: *ami.*  
Food,DIM

%SIT: sahar is crying.

\*MEI: *eyfo ha^ami ?*  
Where's the food,DIM?

\*MEI: *aba axal lexa ?*  
Did Daddy eat it?

\*SAH: *ken.*  
Yes

\*MEI: *ata roce exad xadaš ?*  
Would you like another one?

\*SAH: *ke [ken].*  
Yes

\*MEI: *še ima titen lexa od beygale ?*  
Would you like mummy to give you another bagel,DIM?

\*SAH: *e.*

\*MEI: *ma ata roce ?*  
What do you want?

- \*SAH: *o [od] ami.*  
More food,DIM  
\*MEI: *od ami ?*  
More food,DIM ?  
\*SAH: *ken.*  
Yes

*Smadar, 1;07-2;04.* Smadar produced 27 diminutive forms over a period of 10 months, of which 25 were *i*-suffixed. In addition to attaching *-i* to household items (e.g., *xituli* ‘diaper,DIM’), to people and pet names, she attaches it to the word *teyp* ‘taperecorder’ to yield *teypi* at 1;11. Her use of this diminutive suffix is innovative and productive, and she extends it to the modifying adjective in the NP in an unconventional way which makes it clear she is using diminutives to express sympathy, attachment, intimacy and pleasure (Dressler & Merlini-Barbaresi, 1994):

(16) *Smadar, 2;01*

\*SMD: *hayinu ba^gan ša'ašnim ha^gadoli, ve ve sixaknu ba^ ba^xol,*

%mor: V P&AR N+N A,DIM CONJ CONJ V P&AR P&AR N  
*ve hitgalašnu ve hitgalašnu, ve az nasanu*

%mor: CONJ V CONJ V CONJ ! V

were,1st in-the-garden play the-big,DIM, and and played,1st,Pl in-the-sand, and slid,1st,Pl and slid,1st,Pl, and then drove,1st,Pl

‘We were in the big playground, and and we played in the sand and we slid and slid, and then we drove’

\*SMD: *ze gamadi ha^katani !*

%mor: PN:DEM N,DIM AR A,DIM  
this dwarf,DIM the-little,DIM  
‘This is the little dwarf’

At the same age she produces an ungrammatical *-i* form, *praximi* ‘flowers,DIM’.

*Sivan, 1;11-5;05.* Sivan was recorded sporadically over a long period. She is the only child in the database in whose transcriptions we are able to observe transit from childish *-i* into more mature diminutivization when morphological knowledge is well established after age 4. In Sivan’s recordings between ages 1;11-5;05 there are 32 diminutive types, six of which do not end with diminutive -

i. Of these, five were used by adults at home, e.g., the reduplicated form *tiptipa* ‘drop,DIM’ (cf. *tipa* ‘drop’), foreign-suffixed *ponchik* ‘doughnut’ referring to her baby brother, and the family-lect reduplicated *gufgifuf* ‘body, DIM’ (cf. *guf* ‘body’). One recording at age 4;7 indicates a spurt of unconventional diminutivized nouns such as *iguli* ‘circle,DIM’, *kaduri* ‘ball,DIM’ and *baloni* ‘balloon,DIM’, and even ungrammatical *neroti* ‘candles,DIM’<sup>8</sup>. At age 2;07 she adds the suffix *-i* to the already diminutivized conventional *barvazon* ‘duck,DIM’, but by 5;05 she has clearly mastered both *-i* and *-on*, as evidenced by the double diminutive *arnavoni* ‘rabbit,DIM,DIM’, and by the unconventional form *cfarde’on* ‘frog,DIM’.

## V Discussion

This paper has made an initial attempt to characterize diminutive formation in early child Hebrew. Previous work in the field has shown that cross-linguistically, diminutive forms occur early on in child language development, at a period when morpho-syntax is not yet well-established and morphological operations are almost completely absent (Clark, 1993; Dressler, 1994; Gillis, 1997). One reason for this is obviously the fact that diminutives and hypocoristics frequently occur in early child directed speech or “baby talk” and are particularly suitable to conveying the intimate, playful atmosphere of endearment and attachment typical of a caregiver / child relationship (Stephany, 1997). In addition to being pragmatically appropriate, diminutives have a special status in morphology as a derivational operation that induces no category change beyond the shift from X to “small X” (e.g., *pil* / *pilon* ‘elephant / baby elephant’) and “falls midway between inflection and derivation” (Anderson, 1982; Spencer, 1991:197). As such, diminutives may serve as a bridge between the obligatory, regular, grammatical operations of inflection, and semantically and structurally

unpredictable derivation (Dressler & Merlini-Barbatesi, 1994). This exploratory survey of diminutives in early child Hebrew, though by no means exhaustive, has a number of implications.

The general findings of this paper are the following: Diminutives occur in the speech of Israeli children in their second and third year both as “frozen”, rote-learned forms and in productive, innovative expression. However, these forms do not constitute part of the adult diminutive inventory described in the literature for Hebrew (Avineri, 1964; Bolozky, 1994). Within this age bracket, children do not spontaneously produce foreign, reduplicated or linear *-it* and *-on* diminutives. The overwhelmingly favored option among Hebrew-speaking toddlers is *-i* suffixation of nouns (and sometimes adjectives too - see Ravid & Nir, in press). This split between conventional adult diminutive devices and children’s favored devices has both a semantic and structural motivation and reflects that difference between juvenile and mature word formation.

Diminutivization by *i* may be regarded as a transient pathway into word formation in a number of senses. All children’s *i*-diminutives refer to prototypical nouns - people, animals and concrete, countable objects. The semantic change in *-i*-suffixed forms such as *xituli* ‘diaper, DIM’ is negligible; it almost amounts to calling it ‘my dear diaper to which I am very much attached’. This inflection-like change is non-varying and predictable, and it can be applied to any singular noun without any of the restrictions of derivation. Moreover, as noted by Gillis (1997:168), diminutives are gender-neutral: *i* is equally applicable to masculine and feminine nouns and adjectives. In contrast, as we have seen above, mature diminutivizers are typical derivational constructs in their unpredictable scope, non-automatic semantics, and shared domain with other suffix meanings (Bolozky, 1994). For example, *tiyulon* from *tiyul* ‘stroll’ could in principle refer to a short stroll, but it is in fact a baby stroller. The linear suffixes *-on* and *-it* are gender-sensitive in scope and take only gender-appropriate bases (*-it* takes only

feminine bases, *-on* takes masculine bases and changes to *-tenʔon* (feminine bases).

In fact, *-i* diminutivization is more pragmatic than semantic in taking the child's specific point of view and familiar context into account: *i*-suffixation is context-bound in the sense that it applies to a particular item in a class rather than to a whole - for example, Leor referred to any grandma (such as the one in Red Riding Hood) using the general *safta*, and reserved the diminutivized form *safti* to his own grandmother. All innovative productions of *i*-diminutives are restricted in the same way and are in fact semantically underextended (Barrett, 1995): *masaiti* 'truck,DIM' is not any truck but my own valued toy, and even the big,DIM playground in Smadar's description is a specific, familiar playground. Diminutivization by *-i* may be called a *personalizing* device, taking the diminutivized item "under the wings" of the interlocutor. This is probably why *i*-suffixed diminutive nouns are not pluralizable: while many of them are proper names to begin with (*miryami*, *puzi*, *mushi*), others acquire a unique proper-noun denotation with the attachment of *-i*, e.g., *barvazi* 'duck,DIM', *pili* 'elephant,DIM', and the plural counterparts are ungrammatical. In contrast, *barvazon* and *pilon*, the conventional terms for a small duck and a small elephant are ordinary common nouns, and are pluralizable: *barvazonim*, *pilonim*. Even as diminutivized items, they are not personalized and made unique.

Structurally, too, *i*-diminutivization is marked as a juvenile strategy. Adult diminutive suffixes, like Hebrew nominal suffixation in general, are stress-assigning, and as a result the stem may undergo morphophonological changes. These include vowel deletion (*sagur* / *sgura* 'closed / Fm'), vowel change (*ken* / *kino* 'nest / his nest'), stop / spirant alternation (*kaf* / *kap-it* 'spoon / teaspoon'), *t* insertion or deletion (*sakit* / *sakiy-ot* 'bag / s'), and full stem change (*kʔlev* / *kalb-on* 'dog / puppy'). Diminutivization by *i*, in contrast, leaves the original stem stress intact, and therefore makes no stem changes, e.g., *leycan* / *leycʔni* 'clown / clown,DIM', *gamad* / *gamʔdi* 'dwarf / dwarf,DIM'. Preserving the original

structure and stress pattern of the nominal stem is an early, well-attested childhood strategy in Hebrew (Ravid, 1995).

The second adult diminutivizing device, reduplication, is not accessible to Hebrew-speaking children in their second and third year. Reduplication is a minor structural mechanism uniquely restricted to diminutive formation which differs markedly from the three major structural options that children are exposed to - nonlinear and linear affixation, and compounding. Although reduplication is a universal phonological process in baby talk, it is not really a viable morphological option in Hebrew.

## **VI Conclusion**

This paper presents an exploratory analysis of diminutives in Hebrew child language. There are two classes of diminutives in Modern Hebrew: primary and complex. Adults can access a variety of foreign diminutive suffixes as well as two native morphological diminutive-forming devices: linear suffixation by *-it* and *-on*, and reduplication, both of which are complex structurally and semantically and require knowledge of the behavior of other domains of derivational morphology. Complex diminutives are conspicuously absent in early child Hebrew. The only productive diminutivizing device up to 3 years of age is the structure-preserving suffix *-i* which creates personalized, semantically underextended diminutives. This class of primary diminutives is accessible to Hebrew-speaking children from early on due to a combination of its simplex semantics and form.

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## Notes

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<sup>1</sup> Although it may be the case that it is only the negative pole that may be diminutivized (R. Berman, personal communication).

<sup>2</sup> Sometimes the suffix *-it* appears as *-iya*, originally as the result of backformation from plural *-iyot*, e.g., *ugiya* 'cookie', originally *ugit* 'small cake' from *uga* 'cake' (Ravid, 1995).

<sup>3</sup> Thought historically well-established, deriving from Mishanic Hebrew, spoken in the Second Temple era (Avineri, 1964).

<sup>4</sup> Reduplication in the verbal system is enabled in extracting consonantal skeletons from words and creating a new root by reduplicating the third and last consonant, e.g. root *ʔ-v-r-r* in *ivrer* 'brought fresh air in' from *avir* 'air'; root *t-x-n-n* in *tixnen* 'planned' from *toxnit* 'plan'. The result is not diminutive, although the process originally carried a diminutive function (Sagi, 1997).

<sup>5</sup> Stress is marked only when it precedes the final syllable.

<sup>6</sup> The word *savyon* refers to the flower ragwort, very common to the end of the winter in Israel.

<sup>7</sup> The bound form of *dov* 'bear' is *dub-* as in *dubim* 'bears', which appears in Lior's vocabulary at the same time.

<sup>8</sup> This, however, can be explained on the grounds that *nerot* 'candles' are perceived as the basic form (see discussion in Ravid, 1995).