Chapter 7
Quantifiers in Modern Hebrew

Itamar Francez and Katja Goldring

7.1 Some Basics of Hebrew

This article describes quantifiers in Hebrew, focusing mostly on the standard *spoken* variety of modern Hebrew. Spoken forms diverge significantly in many cases from written and prescribed forms. Such variations are only noted when relevant. Examples are written in loose transliteration, by which we mean that only those phonological forms distinguished in the standard spoken dialect are distinguished in the transliteration.[1] We use S for the palatal fricative, x for the voiceless uvular fricative, and ' for the glottal stop. In many cases, the glottal stop is ignored in transliteration.

Hebrew is an SVO language. Verbs come in three tenses (past, present, future), and generally agree with the subject in person, number and gender, though person and gender distinctions are neutralized in parts of the paradigm.

Adjectives follow the noun they modify. Hebrew has prepositions and no case marking except for the accusative marker *et*, which marks formally definite nouns, i.e. nouns marked with the definite affix *ha*, proper names, and pronouns. Following is a short description of the main facts about definiteness. For more discussion see e.g. Danon (2001, 2008). Definite quantifiers are discussed in more detail in Section 7.5.1.

7.1.1 Definiteness

Definiteness is marked by the clitic *ha* on the head noun, and obligatorily also on all modifying adjectives / demonstratives inside a noun phrase.

[1] The main point of variation from other spoken varieties here is that the voiced pharyngeal stop distinguished in some varieties is here pronounced as the glottal stop, and the voiceless pharyngeal fricative as the voiceless uvular fricative.

I. Francez (✉)
University of Chicago, Chicago, IL, USA
e-mail: ifrancez@uchicago.edu

E.L. Keenan, D. Paperno (eds.), *Handbook of Quantifiers in Natural Language*, Studies in Linguistics and Philosophy 90, DOI 10.1007/978-94-007-2681-9_7,

(1) a. ha-yeled *(ha)-katan
the-boy the-little
The litte boy

b. ha-yeled *(ha)-ze
the-boy the-this
This boy

The prepositions *be* 'in' and *le* 'to' form portmanteaus with the definite article *ha*. We refer to such forms as definite prepositions throughout.

(2) a. *ba* 'in the'
b. *la* 'to the'

The Construct State

Hebrew also has a definite form traditionally known as the 'construct state' (See Heller (2002) for a recent discussion and references). While this form is not productive in spoken Hebrew, it features in many contexts discussed throughout the paper. A construct state NP is formed from a head noun in a special form called the construct state form, followed by a noun in the unmarked, 'absolute' form. The construct form of a noun can be suppletive to, derived from, or identical to the absolute form. (3) and (4) exemplify derived and suppletive forms, respectively. Note that definiteness is marked on all modifiers.

(3) *tmuna* 'picture'
a. tmunat ha-yeled ha-katan
picture.cs the-boy the-little
the picture of the little boy

b. tmunat yeled katan
picture.cs boy little
A/the picture of a little boy

(4) *iSa* 'woman'
a. eSet ha-Saxen
woman.cs the-neighbour
the neighbor's wife

b. eSet saxen
woman.cs neighbour
a neighbor's wife; the wife of a neighbor

In more formal registers, the construct state noun can participate in a possessive construction involving the preposition *Sel* 'of'. In this construction, the construct state noun is suffixed with a morpheme expressing the person, number and gender of the possessed noun.

(5) a. tmunat-o Sel ha-yeled ha-katan
picture.cs-3ms the-boy the-little
The picture of the little boy

b. iSt-o Sel ha-Saxen
woman.cs-3ms of the-neihbour
The neighbor's wife

7.1.2 Quantifier Floating

As in English, quantifier floating is only possible with quantifiers that require a definite noun. The quantifiers that may be floated include *kol* in its meaning 'all' (but not when it means 'every' and 'each', in which case it does not occur with a definite noun), *rov* 'most' (literally, 'majority'), all numerals greater than one, and the quantifier *xelek* 'part'. Floated quantifiers appear in the construct state form[2] and with morphology tracking the person, number and gender of the common noun expressing the domain of the quantifier.

Generally, a quantifier floated from the subject of a sentence (matrix or embedded) can occur either immediately after the subject or else inside the predicate phrase, though we find that the quantifiers *rov* 'most' and *xelek* 'part of' become less acceptable in predicate-internal position. Examples (6) through (13) show quantifier floating from subject position with transitive and intransitive verbs.[3] When *xelek* is not floated, it requires the preposition *me* 'from' on its complement, as shown (12).

(6) a. kol ha-yladim yeSenim.
all the-boy.mpl sleep.mpl
All the boys are sleeping.

b. Ha-yladim (kulam) yeSenim (kulam).
the-boy.mpl all.cs.3mpl sleep.mpl all.cs.3mpl
The boys are all sleeping.

(7) a. kol ha-sefer nirtav.
all the-book got.wet.3ms
The whole book got wet.

b. ha-sefer (kulo) nirtav (kulo).
the-book all.cs.3ms got.wet.3ms all.cs.3ms
The book got all wet.

[2] Possibly, all determiners taking a definite complement appear in the construct state form. See discussion in Section 7.2.

[3] Numeral quantifiers encode gender, both in the absolute and the construct state form. See Section 7.2.3.

(8) a. kol ha-yladim axlu glida.
all the-boy.mpl ate.3pl ice cream
All the boys ate ice cream.

b. Ha-yladim (kulam) axlu (kulam) glida (kulam).
the-boy.mpl all.cs.3mpl ate.3pl all.cs.3mpl ice cream all.cs.3mpl
The boys all ate ice cream.

(9) a. SloSet ha-yladim yeSenim.
three.m.cs the-boy.mpl sleep.mpl
The three boys are sleeping.

b. ha-yladim (SloStam) yeSenim (SloStam).
the-boy.mpl three.cs.3mpl sleep.mpl three.cs.3mpl
The boys are all three of them sleeping.

(10) a. SloSet ha-yladim axlu glida.
three.m.cs the-boy.mpl ate.3pl ice cream
The three children ate ice cream.

b. ha-yladim (SloStam) axlu (SloStam) glida
the-boy.mpl three.cs.3mpl ate.3pl three.cs.3mpl ice cream
(SloStam).
three.cs.3mpl
The children ate all three of them ice cream.

(11) a. rov ha-yladim yeSenim.
most the-boy.mpl sleep.mpl
Most (of the) children are sleeping.

b. ha-yladim (rubam) yeSenim (?rubam).
the-boy.mpl most.cs.3mpl sleep.mpl most.cs.3mpl
Most (of the) children are sleeping.

(12) a. xelek me-ha-yladim yeSenim.
part from-the-boy.mpl sleep.pl
Some of the children are sleeping.

b. ha-yladim (xelkam) yeSenim (?xelkam).
the-boy.mpl part.cs.3mpl sleep.pl most.cs.3mpl
Some (of the) children are sleeping.

(13) a. rov ha-yladim axlu glida.
most the-boy.mpl ate.3pl ice cream
Most (of the) children ate ice cream.

b. ha-yladim (rubam) axlu (?rubam) glida (??rubam).
the-boy.mpl most.cs.3mpl sleep.pl most.cs.3mpl
Most (of the) children ate ice cream.

When the quantifiers *rov* and *xelek* are floated, they are often preceded by the preposition *be* 'in', as in (14), in which case they are impeccable in predicate-internal position, and are also ambiguous between D-quantification and A-quantification.[4]

(14) a. ha-sfarim retuvim be-rubam.
the-book.mpl wet.pl in-most.cs.3mpl
Most (of the) books are wet. / The books are mostly wet.

b. ha-sfarim retuvim be-xelkam.
the-book.mpl wet.pl in-part.cs.3mpl
Some of the books are wet. / The books are partly wet.

Judgments are less clear with ditransitive predicates. Our intuition is that a subject quantifier cannot readily be floated into the verb phrase in a ditransitive clause. Examples such as (15) are certainly marked, though we do not find them clearly ungrammatical.

(15) ha-morim her'u (?kulam)
the-teacher.mpl showed.3pl all.cs.3mpl
le-dani (?kulam) et ha-sefer
to-Dani all.cs.3mpl acc the-book
(?kulam)
all.cs.3mpl
The teachers all showed Dani the book.

Floating out of object position is exemplified in (16), and out of indirect object position in (17).

(16) axalti et ha-tapuxim kulam.
ate.1s acc. the-apple.mpl all.cs.3mpl
I ate all the apples.

(17) natati tapuxim la-yladim kulam.
gave.1s apple.mpl to.the-boy.mpl all.cs.3mpl
I gave apples to all the boys.

When a floated quantifier can be associated with more than one NP in the sentence, as in (18), ambiguity arises.

(18) ha-morim her'u li et ha-sfarim kulam.
the-teacher.mpl showed.3pl to.me acc. the-book.mpl all.cs.3ms
The teachers showed me all the books.
The teachers all showed me the books.

(19) shows that multiple floated quantifiers are possible, but may not be adjacent.

[4] These two points are due to Edit Doron (Personal Communication).

(19) a. SloSet ha-yladim ra'u et kol ha-sfarim.
three.m.cs the-boy.mpl saw.3pl acc. all the-book.mpl
The three boys saw all the books.

b. ha-yladim ra'u SloStam et ha-sfarim kulam
the-boy.mpl saw.3pl three.m.sc.3mpl acc. the-book.mpl all.cs.3mpl
The three boys saw all the books.

c. *ha-yladim ra'u et ha-sfarim SloStam kulam / kulam SloStam.

For more discussion of quantifier float in Hebrew see Shlonsky (1991).

7.1.3 Negative Concord

Hebrew is a negative concord language. In the presence of matrix negation, certain negative forms which we refer to as *n-words* occur. Examples are given in (20) and (21). While some pronouns, such as *klum* 'nothing' in (20-b), have special forms, other pronoun and all full NP *n-words* are formed with one of two negative forms: *af* (glossed as any_c, since it can only combine with count nouns), which literally means 'also', and *Sum* (glossed as any_m, since it can combine with mass nouns and plurals). (22) shows that mass nouns and plurals can only occur with *Sum*. A recent discussion of *Sum* and *af* is found in Levy (2008).

(20) a. miSehu raa maSu
someone saw.3sg something
Someone saw something.

b. **af** exad **lo** raa **klum**
any_c one neg saw.3sg nothing
Nobody saw anything.

c. **lo** raiti **Sum** davar.
not saw.1s any_m thing
I didn't see anything.

d. **lo** moxrim et ze be-**af**/**Sum** makom.
neg sell.3pl acc. this in-any_c/any_m place
They don't sell this anywhere.

(21) a. **af**/**Sum** yeled **lo** diber.
any_c/any_m boy neg spoke.3ms
No boy spoke.

b. hu **lo** diber im **af**/**Sum** more.
he neg spoke.3ms with any_c/any_m teacher
He didn't talk to any teacher.

(22) a. lo Satiti Sum/*af mayim.
neg drank.1s any_m/*any_c water
I didn't drink any water.

b. lo raiti Sum/*af susim
neg saw.1s any$_m$/*any$_c$ horses
I didn't see any horses.

7.2 Three Basic Classes of Quantifiers

7.2.1 Intersective Quantifiers

Hebrew does not have an indefinite article, and indefinites generally occur bare. Plurality is marked by a suffix *-im* for masculine nouns, *-ot* for feminine nouns, with some idiosyncratic exceptions.

(23) raiti tmuna Sel ha-rambam me'al ha/la-'ax
saw.1sg picture of Maimonides above the/to.the-fireplace
I saw a picture of Maimonides above the fireplace.

(24) malaxim Saru ba-rexov
sailor.mpl sang.3pl in.the-street
Some sailors were singing / sang in the street.

A plural indefinite noun as in (24) can also be preceded by one of the following lexemes to express a meaning roughly similar to 'some' / 'several':

- *kama* 'several'.
- *mispar* 'a number of' (literally 'number') (*mispar* can also follow the head noun).
- *axad-im* (feminine *axad-ot*), the plural version of the numeral *exad* (feminine *axat*) 'one' discussed below.

(25). a. mispar / kama naSim panu la-avoda ha-zot
number / some women turned.3pl to.the-work the-this.f
Several / a number of women applied for this job.

b. naSim axad-ot panu la-avoda ha-zot.
women one-fpl turned.3pl to.the-work the-this.f
A number of women applied to this job.

In subject position, bare indefinites can be interpreted generically. Both (24) above and (26) can be read either existentially or generically.

(26) naSim panu la-avoda ha-zot.
women turned.3pl to.the-work the-this.f
Women applied for this job.

The numeral *exad* 'one' (feminine *axat*) is unique among the numerals in following the head noun (like adjectives do). It can occur on indefinite NPs to indicate non-specificity, either in the sense of ignorance, or lack of concern (27).

(27) kaniti la sefer (exad), lo zoxeret / xaSuv eze.
bought.1s to.3fs book one neg remember.fsg / important which
I bought her some book, I can't remember which / it doesn't matter which.

The numeral *exad* 'one' cannot mark the object of an opaque verb on its 'unspecific', or *notional* reading. Thus, (28) can only have a *de-re* reading.

(28) ani mexapes xad-keren exad.
I seek.ms one-horn one
I am looking for some unicorn.

The *wh-* word *eze* 'which' (Kagan and Spector 2008), as well as the items *eze-Se-hu* (feminine *eze-Se-hi* or *ezo-Se-hi*) and the higher register *kol-Se-hu* (feminine *kol-Se-hi*), can be used in a similar way, though they are not restricted to singular nouns.

(29) a. ten li eze sefer.
give.imp.ms to.1s which book
Give me some book.

b. kaniti lo eze sefer / sfarim.
bought.1s to.3ms which book / book.mpl
I bought him some book(s)

c. kaniti lo eze-Se-hu/hem sefer / sfarim.
bought.1s to.3sm which-that-he/they book / book.mpl
I bought him some book(s).

d. kaniti lo sefer kol-Se-hu.
bought.1s to.3sm book all-that-he
I bought him some book.

Other numerals are described in Section 7.2.3 below.

7.2.2 Existential Sentences

Existential sentences in Hebrew are formed with the lexemes *yeS* (positive) and *en* (negative, in more formal varieties written *eyn*), which we gloss as EX and NEX respectively. In the non-present, these lexemes are replaced with forms of the verb *haya* 'be'.

(30) a. yeS xameS naSim ba-kita axSav. Sana Se-avra hayu eser.
EX five women in.the-class now. year that-passed be.3pl ten
There are five women in the class now. Last year there were ten.

b. en naSim ba-kita axSav. Sana Se-avra gam lo hayu
NEX women in.the-class now. year that-passed also neg be.3pl
There are no women in the class now. Last year there were also none.

Hebrew existential sentences have a range of peculiar morphological and morphosyntactic properties which are not yet well understood and which we do not discuss here (for some discussion and references, see Falk 2004, Francez 2006).

Negative existentials must be formed with *en*, it is not possible to use sentential negation to negate a positive existential.

(31) *lo yeS anaSim ba-xeder.
not EX people in.the-room
There aren't any people in the room.

The negative existential lexeme *en* is also used for sentential negation in older and more formal varieties, as exemplified in (32). When *eyn* is used as sentential negation, it must agree in person, gender and number with a preceding subject (32-b). Such inflection is possible in existentials only when the pivot is indefinite, and only with positive existentials, as shown in (33). (33-a,b) show that inflection is not possible in existentials with a definite pivot. (33-c) shows it is possible in positive, but not negative, existentials with an indefinite pivot.

(32) a. eyn ata mevin.
neg you understand
You do not understand.

b. ata eynxa mevin.
you neg.2sm understand
You do not understand.

(33) a. en / *eneno oto ba-reshima
NEX / NEX.3sm acc.3sm in.the-list
He doesn't appear on the list. (Lit.: There isn't him on the list.)

b. yeS / *yeSno oto ba-reshima.
EX / EX.3sm acc.3sm in.the-list
He appears on the list. (Lit.: There is him on the list.)

c. yeSnam anaSim ba-reshima.
EX.3plm people in.the-list
There are people on the list.

d. *enam anaSim ba-reshima.
NEX.3plm people in.the-list
There aren't people on the list.

The pivot in a negative existential with *en* must occur with an *n-word*, as shown in (34).

(34) a. yeS miSehu ba-bayit.
EX someone in.the-house
There is someone in the house.

b. *en miSehu ba-bayit
NEX someone in.the-house
There isn't anyone in the house.

c. en af exad ba-bayit.
NEX n1 one in.the-house
There isn't anyone in the house.

Possession

The existential lexemes are also used to form possessive constructions, as exemplified in (35). The possessor is marked with the dative preposition *le* 'to'.

(35) a. yeS li kesef ba-kis.
EX to.1s money in.the-pocket
I have money in my pocket.

b. en li kesef ba-kis.
NEX to.1s money in.the-pocket
I don't have money in my pocket.

Restrictions on Determiners

Hebrew existentials can occur with a very wide variety of NP types (the earliest discussion of this we are aware of in the generative literature is Ziv 1982). As shown in (33), pivots can be personal pronouns. Pivots can also be proper names, and can be headed by determiners that are not existential by the definition of Keenan (1987), or that are strong in the sense of Barwise and Cooper (1981), as shown in (36). Note that the examples in (36) are not possessive since no dative case is involved.

(36) a. yeS et rov ha-sfarim Sela ba-sifriya.
EX acc. most the-book.mpl of.3fs in.the-library
The library has most of her books.

b. yeS et kol ha-hesberim ba-xoveret.
EX acc. all the-explanation.mpl in.the-booklet
The booklet has all the explanations.

Thus, Hebrew seems to have virtually no definiteness effect. However, this is not entirely accurate, as there are some interpretational restrictions on pivots that are non-existential and/or strong. In particular, such pivots tends to be interpreted as quantifying over *types* rather than *tokens*. For example, (36-a) is normally interpreted to mean that the library has copies of most of her books, rather than most of the actual token books she owns or has written.

Furthermore, purely locational readings are blocked for such pivots. For example, (37-a), from Ziv (1982), can only mean that Chomsky is on the MIT faculty list, not that he is physically there, for which the canonical predicative locative (37-b) must be used. (37-b) is ambiguous between a locative reading (Chomsky is physically at MIT) and a reading equivalent to that of (37-a) (Chomsky is faculty at MIT).

(37) a. yeS et xomsky be-MIT.
EX acc. Chomsky in-MIT
MIT has Chomsky (on the faculty).

b. Xomsky be-MIT.
Chomsky in-MIT
Chomsky is in MIT.

The contrast can easily be intuited by considering which questions (37-a) and (37-b) can answer. (37-a) (or a word-order variant of it) can answer a question like *why did you chose MIT?*, but not *where is Chomsky?* (37-b) can answer either question.

7.2.3 Numerals and Modified Numerals

Numerals other than *exad*/*axat* 'one' precede the noun. Numerals have masculine and feminine forms.

(38) a. xameS naSim rakdu.
five.f women danced.3pl
Five women danced.

b. xamiSa gvarim rakdu
five.m men danced.3pl
Five men danced.

The numeral for *two* has a different form (similar to a construct state form) when it occurs as a determiner immediately preceding the common noun, and when it occurs in other positions. This is shown in (39).

(39) a. Sney anaSim rakdu.
two.m people danced
Two people danced.

b. A: kama anaSim rakdu? B: Snayim.
A: how.many people danced? B: two
A: How many people came? B: Two.

For discussion of expressions equivalent to *some* or *several* see Section 7.2.1 above. Following are examples of some other modified numerals.

(40) *More than five*

a. yoter mi-xameS
more from-five.f
More than five

b. le-mala mi-xameS
to-up from-five.f
More than five (formal)

(41) *less than five*

a. paxot mi-xameS
less from-five.f
Less than five

b. le-mata mi-xameS
down from-five.f
Less than five (formal)

(42) karov le-eser
cole to-ten.f
close to ten

In (43) to (45), the modifier can precede the numeral or follow it. It may also follow the common noun following the numeral.

(43) *at least five*
a. le-faxot xameS
to-less five.f
at least five

b. le-xol ha-paxot xameS
to-all the-less five.f
at least five

(44) *approximately ten*
a. be-erex eser
in-approximation ten.f
approximately ten

b. paxot o yoter eser
less or more ten.f
more or less five

c. eser be-keruv
ten.f in-closeness
approximately ten

(45) kim'at mea
almost hundred
almost a hundred

(46) ben xameS le-eser
between five.f to-ten.f
between five and ten

(47) *infinitely many*
a. en-sof
NEX-end
infinitely many (Lit. 'no end of')

b. en-sfor
NEX-count
uncountably many

c. bli sof
without end
endlessly many

(48) be-koSi xameS
in-difficulty five.f
hardly five

All of the modified numerals discussed here can also be separated from the common noun (this is a phenomenon distinct from quantifier floating, discussed above). Some examples are given in (49).

(49) yeladim raiti harbe / SloSa / en-sfor / bekoSi exad.
children saw.1s many / three / NEX-count / hardly one
Children I saw many / three / infinitely many / hardly one.

In such cases the bare noun is a contrastive topic. A discourse exemplifying the use of this kind of word order is given in (50).

(50) Samati Se-yeS Sam arayot ve-nemerim, az nasati le-Sam. arayot
heard.1s that-EX there lions and-tigers, so traveled.1s to-there. lions
raiti kama, aval nemerim be-koSi exad.
saw.1s several, but tigers in-difficulty one
I heard there were lions and tigers there, so I went there. Lions I saw several, but tigers hardly even one.

The following modified numerals are syntactically in a type of partitive construction.

(51) *finitely many*
a. kamut sofit Sel
quantity finite.f of
finitely many (lit.: a finite quantity of)
b. mispar sofi Sel
number finite of
finitely many (lit.: a finite number of)

Sel 'of' is the possessive preposition. In (51), it is used as a partitive and must be followed by a mass or plural noun.

7.2.4 Value Judgment Cardinals

Hebrew used to encode a mass-count distinction between value judgment cardinals, i.e. between the words for *much* vs. *many* and for *little* vs. *few*. However, this distinction is not maintained in spoken varieties today. The mass forms in (52-a) are used practically exclusively in speech, whereas the count forms in (52-b) are considered archaic. Examples (52-c,d) might be considered colloquial.

(52) a. raiti harbe / meat mayim / anaSim.
saw.1s much / little water / people
I saw much / little water / people.
b. raiti anaSim rabim / meatim.
saw.1s people many / few.mpl
I saw many / few people.

c. raiti male / hamon anaSim
saw.1s full / lots people
I saw many people.

d. raiti kcat anaSim.
saw.1s little people
I saw few people.

(53) a. yoter mi-day anaSim ba'u.
more from-enough people came.3pl
Too many people came.

b. paxot mi-day anaSim ba'u.
less from-enough people came.3pl
Not enough people came.

c. (lo) maspik anaSim ba'u.
neg enough people came.3pl
(Not) enough people came.

Value cardinals can be adverbially modified to achieve meanings similar to such as *surprisingly many*, as in (54).

(54) a. raiti kol kax harbe anaSim!
saw.1s all so much people
I saw so many people!

b. raiti mamaS harbe anaSim!
saw.1s really much people
I saw a whole lot of people.

7.2.5 Interrogatives

The cardinal question word is *kama* 'how many', and the intersective non-cardinal one is *eyze* 'which'. In more formal registers, a distinction is made between the masculine singular *eyze*, the feminine singular *eyzo*, and the plural *elu*.

(55) kama anaSim ba'u?
how.many people came.3pl
How many people came?

(56) eyze/elu anaSim ba'u?
which people came.3pl
Which people came?

(56) can also be used to ask *what kinds of people came*?

7.2.6 Boolean Compounds

Some examples of Boolean compounds are given in (57) and (58).

(57) a. lo yoter mi-xamiSa anaSim ba'u.
neg more from-five.m people came.3pl
Not more than five people came.

b. le-faxot Snayim aval lo yoter mi-asara anaSim ba'u.
to-less two.m but not more from-ten.m people came.3pl
At least two but not more than ten people came.

Note the difference in the form of the numeral *Snayim* 'two' when it is adjacent to the noun, as in (58-b), and when it is not adjacent, as in (58-a) (cf. the discussion of example (39) above).

(58) a. Snayim o SloSa anaSim ba'u.
two.m or three.m people came.3pl
Two or three people came.

b. Sney banim ve-SaloS banot ba'u.
two.m boys and-three.f girls came.3pl
Two boys and three girls came.

(59) shows compounding with negation. The same meaning obtains when *n-words* are used instead of negation, as in (59-c).

(59) a. (lo) ba'u lo banim ve-lo banot.
neg came.3pl neg boys and-neg girls
Neither boys nor girls came.

b. lo gvarim ve-lo naSim (lo) rocim oto.
neg men and-neg women neg want.3mpl 3ms
Neither men nor women want it.

c. af ben ve-af bat lo ba'u.
any$_c$ boy and-any$_c$ girl not came.3pl
No boy and no girl came.

7.2.7 Numeral Classifiers

Hebrew does not in general require numeral classifiers. Count nouns simply follow the numeral, as discussed in Section 7.2.3. However, with mass nouns and some count nouns, various lexemes, which we refer to here as classifiers, are used to express conventionally or naturally delineated units of measure.

Mass and count nouns can be distinguished in that only the former can appear in the singular after a determiner like *harbe*. For current purposes, we take this to be a defining property, i.e. we use 'mass noun' to refer to those nouns that can occur in the singular after *harbe*.

(60) a. yeS harbe tiras.
EX much corn
There is a lot of corn.

b. #yeS harbe Sulxan.
EX much table
#There is a lot of table.

c. yeS harbe Sulxanot.
EX much table.fpl
There are many tables.

A mass noun can either occur in the singular with a classifier, or else in the plural immediately following the numeral. Plural marking thus turns mass nouns into count. For example, compare (60-a) with (61).

(61) yeS harbe tirasim.
EX many corn.mpl
There are many ears of corn.

Plural mass nouns denote maximal conventionally or naturally delineated quantities (such as an ear of corn). Classifiers can express either maximal quantities or smaller quantities. Examples are given in (62). (Some classifiers do not have lexical meanings other than the units of measure they express. In such cases, the classifier is glossed CLS.)

(62) a. Sney kilxey tiras.
two.m CLS.cs corn
two ears / kernels of corn

b. Sney tirasim
two.m corn.mpl
two ears / kernels of corn

(63) a. Sney raSey Sum
two.m heads.cs garlic
two heads of garlic

b. Sney Sumim
two.m garlic.mpl
two heads of garlic

(64) a. Stey prusot lexem
two.f slice.fpl.cs bread
two slices of bread

b. Stey kikrot lexem
two.f CLS.cs bread
two loaves of bread

c. Sney lexamim
two.m bread.mpl
two loaves of bread

With some mass nouns, a classifier is obligatory and plural marking is not possible.

(65) Sney *(gargirey) orez / melax
two.m grain.mpl.cs rice / salt
Two grains of rice / salt

Count nouns can occur with classifiers that express a quantity different from the conventional single unit associated with the noun. Examples are give in (66).

(66) a. Sney pilxey tapuz
two.m portion.mpl.cs orange
Two pieces of orange.

b. Sney eSkolot anavim
two.m CLS.cs grapes
Two bunches of grapes

Container expressions and measure phrases are exemplified in (67). Container expressions appear in the construct state.

(67) a. Stey xafisot klafim / cigaryot
two.f pack.fpl.cs card.mpl / cigarette.fpl
Two decks of cards / boxes of cigarettes

b. Sney bakbukey yayin
two.m bottle.mpl.sc wine
Two bottles of wine

c. Sney kilo melax
two.m kilogram salt
Two kilograms of salt

The classifier *xatixa* 'piece' can precede a mass noun,[5] inducing a partitive meaning, i.e. expressing a quantity smaller than the conventional single unit associated with the noun when it is in the plural. Examples are given in (68) and (69).

(68) a. Stey xatixot Sokolad
two.f piece.fpl.cs chocolate
Two pieces of chocolate

b. Sney Sokoladim
two.m chocolate.mpl
Two bars of chocolate

(69) a. Stey xatixot lexem
two.f piece.fpl.cs bread
Two pieces of bread

[5] Only mass nouns describing non-fluid material can be preceded by *xatixa*.

b. Sney lexamim
two.m bread.mpl
Two loaves of bread

This classifier can also occur with a count noun, in which case it has the effect of turning it into a mass noun and inducing the same partitive reading (cf. English *There is a lot of dog on the road*).

(70) yeS xatixat Sulxan / kelev ba-rexov.
EX piece.cs table / dog in.the-street
There is a piece of table / dog on the street.

For recent discussion see Rothstein (2009) and Doron and Müller (2011).

7.2.8 Units of Time and Distance

Examples of time expressions:

(71) a. yaSanti Seva Saot.
selpt.1s seven hours
I slept seven hours.

b. yaSanti be-meSex Seva Saot.
slept.1s in-duration seven hours
I slept for seven hours.

(72) a. bati hena le-Savua.
came.1s here to-week
I came here for a week.

b. nasati le-Sam le-Savua.
went.1s to-there to-week
I went there for a week.

(73) a. axzor od Siv'a yamim.
will.return.1s more seven day.mpl
I will return in seven days.

b. yeS Siv'a yamim be-Savua.
EX seven day.mpl in-week
There are seven days in a week.

Examples of distance expressions:

(74) a. Tel-aviv rexoka arbaim kilometer mi-xaifa.
tel-aviv far.f forty kilometer from-Haifa
Tel Aviv is forty kilometers from Haifa.

b. Tel-aviv ze arbaim kilometer mi-xaifa.
tel-aviv that.m forty kilometer from-Haifa
Tel Aviv is forty kilometers from Haifa.

Examples of comparatives:

(75) a. Dani namux mi-Dina be-arbaim sentimeter.
Dani short from-Dina in-forty centimeters
Dani is 40 centimeters shorter than Dina.

b. Dani arbaim sentimeter yoter namux mi-Dina.
Dani forty centimeters more short from-Dina
Dani is 40 centimeters shorter than Dina.

7.2.9 A-Quantifiers

Many adverbial quantifiers are formed with some form of the noun *paam* 'time'.

(76) a. ani li-f'amim noheg la-avoda.
I to-time.pl drive.ms to.the-work
I sometimes drive to work.

b. bikarti be-taSkent paamayim / arba peamim.
visited.1s in-Tashkent twice / four time.pl
I visited Tashkent twice / four times.

c. bikarti be-taSkent paam.
visited.1s in-Tashkent time
I visited Tashkent once.

d. bikarti be-taSkent harbe peamim.
visited.1s in-Tashkent many time.pl
I visited Tashkent many times.

e. nahagti la-avoda lo harbe meod peamim.
drove.1s to.the-work neg much very time.pl
I drove to work not very many times.

f. ani noheg la-avoda harbe / hamon / meat.
I drive.sm to.the-work much / a lot / little
I drive to work a lot / little.

Negative adverbial quantifiers take several forms, all translated as *never*. The form *me-olam* can only occur with a past tense verb. The form *le-olam* only with a future tense verb.

(77) a. ani af paam lo nahagti / enhag / noheg la-avoda.
I any$_c$ time neg drove.1s / will.drive.1s / drive.1ms to.the-work
I never drove/drive/will drive to work.

b. ani le-olam lo enhag la-avoda.
I to-world neg will.drive.1s to.the-world
I will never drive to work.

c. ani me-olam lo nahagti la-avoda.
I from-world neg drove.1s to.the-work
I've never driven to work.

The expression *ey-pa'am* has a meaning roughly parallel to English *ever*. This expression is used in questions, conditionals, and with superlatives, as shown in (78).

(78) a. nahagta ey-paam la-avoda?
drove.2ms ever to.the-work?
Have you ever driven to work?

b. im ata ey-paam ba-sviva, tavo levaker.
if you ever in.the-surrounding, will.come.2ms visit.inf
If you're even in the area, come visit.

c. zot ha-memSala haxi grua ey-paam.
this.f the-government most bad ever
This is the worst government ever.

d. zot ha-memSala haxi grua Se-ey-paam nivxera.
this.f the-government most bad that-ever be.elected.3fs
This is the worst government that was ever elected.

It can also occur in subordinate clauses of negated or inherently negative verbs (79-a,b). However, unlike English *ever*, it cannot occur in the immediate scope of negation (79-c), where an *n-word* is required. An exception to this seems to be interrogative contexts like (79-d). This is a naturally occurring example, and others similar to it can be found in corpora, though in our own judgment such examples are ungrammatical.[6]

(79) a. Saxaxti Se-ey-paam nahagti la-avoda.
forgot.1s that-ever drove.1s to.the-work
I forgot that I ever drove to work.

b. ani *(lo) xoSevet Se-ani ey-paam enhag la-avoda.
I neg think that-I ever will.drive.1s to.the-work
I don't think I will ever drive to work.

c. *ani lo nahagti ey-paam la-avoda.
I neg drove.1s every to.the-work
Intended: I didn't ever drive to work.

d. mi lo xalam ey-paam lihiyot kosem?
who neg dreamt.3ms ever be.inf magician.m
Who has not dreamt of being a magician?

The lexeme *midey* is used with varying quantificational force. Preceding *paam*, it is interpreted as a cardinal quantifier meaning roughly 'from time to time'.

[6] We thank Edit Doron for pointing out such examples to us.

Preceding time-unit nouns like *Sana* 'year' it is interpreted as a universal quantifier. Examples are given in (80). This is somewhat reminiscent of the use in English of *every* with variable force in examples like "every now and then" vs. "every year".

(80) a. ani noheg la-avoda midey paam.
I drive.1s to.the-work midey time
I drive to work from time to time.

b. ani noheg la-avoda midey yom.
I drive.1s to.the-work midey day
I drive to work every day

7.3 Generalized Universal (Co-intersective) Quantifers

D-Quantifiers

Following are examples of co-intersective quantifiers. The determiner *kol*, glossed for convenience as 'all', can precede either a bare singular or a definite plural noun. Doron and Mittwoch (1986) show that *kol* can also combine with a bare plural, in which case it is an NPI, as in (81).

(81) lo nigremu kol nezakim.
neg be.caused.3pl any damage.mpl
No damage was caused.

As noted in Section 7.1.2, when the complement of the determiner is definite, the determiner can float, in which case it agrees in person, number and gender with the noun. (84) exemplifies combinations of *kol* with conjoined nouns. Disjunction works in the same way.

(82) a. kol meSoreret xolemet.
all poet.f dream.3fs
Every/each poet(s) dream.

b. kol ha-meSorerot xolmot.
all the-poets.f dream.3fpl
All the poets dream(s).

(83) a. kol yeled ba-kita katav Sir.
all boy in.the-class wrote.3ms poem
Every/each boy in the class wrote a poem.

b. kol ha-yladim ba-kita katvu Sir.
all the-children in.the-class wrote.3pl poem
All the children in the class wrote a poem.

c. ha-yladim ba-kita kul-am katvu Sir.
the children in.the-class all-3pl wrote.pl poem
The children in the class all wrote a poem.

(84) kol iS, iSa ve-yeled azvu et ha-ir.
every man woman and-child left.3pl acc. the-city
Every man, woman and child left the city.

When *kol* occurs with a singular noun complement, it can only be read distributively, as evidenced by the impossibility of (85-a). When *kol* is followed by a plural definite noun, the resulting NP can be read collectively (85-b).

(85) a. #kol yeled nifgaS ba-kikar.
all boy met.3ms in.the-square
Every boy met in the square.

b. kol ha-yladim nifgeSu ba-kikar.
all the-boys met.3pl in.the-square
All the boys met in the square.

(86) demonstrates that *kol* followed by a definite and by a bare singular noun have different scopal behavior inside a possessive NP.

(86) a. tmuna Sel kol ha-yladim amda al ha-Sulxan.
picture of all the-children stood.3fs on the-table
A picture of all the children stood on the table. (Possibly one picture, several children)

b. tmuna Sel kol yeled amda al ha-Sulxan.
picture of all boy stood.3fs on the-table
A picture of every boy stood on the table. (As many pictures as children)

The default interpretation of the sentences in (87-a,b) is generic, i.e. the sentences deny the generalization that cats are grey. However, (87-a) also has a non-generic interpretation, in which some restricted set of cats is said to include non-grey members. This reading is not available for (87-b).

(87) a. lo kol ha-xatulim (hem) aforim.
neg all the-cats (COP.mpl) grey.pl
Not all cats are grey / Not all the cats are grey.

b. lo kol xatul (hu) afor.
neg all cat (COP.ms) grey
Not every cat is grey.

Examples of exception phrases are given in (88).

(88) a. kol ha-studentim xuc mi-Snayim xolim.
all the-students out from-two sick.pl
All the students except two are sick.

b. kol ha-studentim milvad yosi xolim.
all the-students except Yosi sick.pl
All the students except Yosi are sick.

c. kol student xuc mi- / milvad yosi yaxol laavor et ha-bxina
all student out from- / except yosi can.ms pass.inf acc. the-exam
Every student except Yosi can pass the exam.

Hebrew provides evidence that exceptives can occur with non-universals (García Álvarez 2009).

(89) harbe studentim xuc mi-yosi mitnagdim la-acuma.
many students out from-yosi oppose.mpl to.the-petition
Many students besides Yosi oppose the petition.

The quantifier *ha-kol* corresponds to English *everything*.

(90) a. axalti ha-kol.
ate.1s the-all
I ate everything.

b. ha-kol ta'im.
the-all tasty
Everything is tasty.

c. natati la (et) ha-kol.
gave.1s to.her acc. the-all
I gave her everything.

A-Quantifiers

Following are examples of co-intersective adverbial quantifiers and frequency adverbs.

(91) *tamid* 'always'

a. ani (kim'at) tamid nosea la-avoda ba-otobus.
I (almost) always ride to.the-work in.the-bus
I (almost) always take the bus to work.

b. ani tamid nextax kSe-ani mitgaleax.
I always get.cut.ms when-I shave.ms
I always cut myself when I shave.

(92) *kol paam* 'every time'

a. ani (kimat) kol paam nofel.
I (almost) all time fall.ms
I fall (almost) every time.

b. Dani nextax (be) kol paam Se-hu mitgaleax.
Dani get.cut.ms (in) all time that-he shave.ms
Dani cuts himself whenever he shaves.

(93) *kol ha-zman* 'all the time'

a. ani (kimat) kol ha-zman nofel.
I (almost) all the-time fall.ms
I fall (almost) all the time.

b. Dani nextax kol ha-zman kSe-hu mitgaleax.
Dani get.cut.ms all the-time when-he shave.ms
Dani cuts himself all the time when he shaves.

Reduplication

Universal A-quantfiers can be formed productively with reduplication of a time-unit word. For example, the reduplicative expression *yom yom* 'day day' means 'daily'. Examples are given in (94).

(94) *yom yom* 'daily'

a. ani noheg la-avoda yom yom.
I drive.ms to.the-work day day
I drive to work daily.

b. ani mitgaleax yom yom kSe-ani melamed.
I shave.ms day day when-I teach.ms
I shave daily when I teach.

c. ani bodek do'ar Sa'a Sa'a.
I check.ms mail hour hour
I check mail every hour.

d. erev erev megi'a iton.
evening evening arrives.ms newspaper
Every evening a newspaper arrives.

Reduplication is also used in a similar way to form distributive quantifiers, described in Section 7.5.14.

Quantifiers Based on Interrogatives

Hebrew equivalents of English *wh*-ever quantifiers are formed with the *wh*-words as follows.

(95) *mi* 'who'

a. mi Se-nirSam me-roS mekabel hanaxa.
who that-sign.up.ms from-head receive.ms reduction
Whoever signs up in advance gets a reduction.

b. mi Se-'asa et ze Se-yakum.
who that-did.3ms acc. this that-will.stand.3ms
Whoever did this, stand up!

(96) *ma* 'what'
Dani oxel ma Se-notnim lo.
Dani eat.ms what that-give.mpl to.him
Dani eats whatever he is given.

(97) *matay* 'when'
Dani oxel matay Se-efSar.
Dani eat.ms when that-possible
Dani eats whenever possible.

(98) *ex* 'how'
Dani mitlabeS ex Se-omrim lo.
Dani dress.ms how that-say.mpl to.him
Dani dresses however he is told to.

An interesting property of *wh*-ever phrases in Hebrew is that they license, and sometimes require, expletive negation or the particle *rak* 'only'. For example, (98) can also be expressed as (99-a), and (96) as (99-b). For a recent discussion of expletive negation in Hebrew see Eilam (2009).

(99) a. Dani oxel matay Se-**rak** efSar.
Dani eat.ms when that-only possible
Dani eats whenever possible.

b. Dani oxel ma Se-**lo** notnim lo.
Dani eat.ms what that-not give.mpl to.him
Dani eats whatever he is given.

In an episodic, extensional context, the presence or absence of expletive negation can mark the difference between a quantificational free relative interpretation involving universal force, and an interpretation similar to that of a definite description. This is exemplified by the contrast in (100).

(100) a. Dani axal ma Se-natati lo.
Dani ate.3ms what that-gave.1s to.him
Dani ate what I gave him.

b. Dani axal ma Se-lo natati lo.
Dani ate.3ms what that-not gave.1s to.him
Dani ate whatever I gave him.

7.4 Proportional Quantifiers

D-Quantifiers

The determiner *most* is expressed in spoken Hebrew by the noun *rov* 'majority' in the construct state (101-a) or in a full possessive form (101-b). In more formal registers the noun *marbit* 'most' is also used (101-c).

(101) a. rov ha-meSorerim xolmim.
majority.cs the-poets dream.mpl
Most (of the) poets dream.

b. rubam ha-gadol Sel ha-rehitim Svurim.
majority.cs.3mpl the-big.ms of the-furniture.mpl broken.mpl
The great majority of the furniture is broken.

c. marbit ha-meSorerim xolmim.
majority.fs.cs the-poet.mpl dream.mpl
Most (of the) poets dream.

The exact status of *rov* is not entirely clear to us. It has clear uses as a noun meaning 'majority'.

(102) a. ha-rov hitnaged la-haxlata.
the-majority objected.ms to.the-decision
The majority opposed the decision.

b. be-demokratya ha-rov maxlit.
in-democracy the-majority decides.ms
In democracy the majority rules.

Its quantificational use might be argued to involve this noun in the construct state. The fact that *rov* requires a definite NP complement might support this view. However, agreement facts might be taken to argue against it. When a construct state NP is the subject of an agreeing predicate, agreement is always with the construct state noun, as in (103-a). However, an NP in which *rov* occurs as a determiner triggers agreement with the common noun, not with *rov*, as shown for number and gender agreement in (103). In (103-a) the adjective *Svura* 'broken' is singular and feminine, like the construct state noun *tmunat* 'picture (of)', and unlike the common noun *yladim* 'children', which is masculine and plural. In (103-b), the verb *Saru* 'sang' agrees not with *rov*, but with the plural common noun *yeladot* 'girls'.

(103) a. tmunat ha-yladim Svura.
picture.fs.cs the-boy.mpl broken.fs
The picture of the children is broken.

b. rov ha-yeladot gvohot.
majority.ms.cs the-girl.fpl tall.fpl
Most (of the) girls are tall.

Nevertheless, this is not conclusive evidence, as clear occurrences of *rov* in the construct state also fail to trigger agreement on an agreeing predicate, which instead agrees with the common noun, as shown in (104).

(104) a. kalbam Sel ha-yladim barax.
dog.ms.cs.3mpl of the-boy.3mpl escaped.3ms
The children's dog ran away.

b. rubam Sel ha-yladim nirdemu /
majority.ms.cs.3mpl of the-boy.mpl fell.asleep.3mpl /
*nirdam.
fell.asleep.3ms
Most of the children fell asleep.

The following proportional quantifiers are formed with the preposition *mi*/*me* 'from', or with the preposition *mitox* 'from'. The latter is morphologically complex, composed of the preposition *mi* and the noun *tox* 'inside' in the construct state. In the following examples, both are glossed as 'from'.

(105) a. Siv'a mi-/mitox asara meSorerim xolmim.
seven from ten poets dream.mpl
Seven out of ten poets dream.

b. rak exad mi-kol asara studentim yekabel milga.
only one from-all ten.m students will.receive.3ms scholarship
Only one out of ten students will get a scholarship.

c. afilu exad mitox asara morim lo yodea et ha-tSuva.
even one from ten.m teachers neg knows.ms acc. the-answer
Not even one teacher in / out of ten knows the answer.

Partitives are also formed with the preposition *mi*-. Partitive determiners generally require definite complements.

(106) a. Smonim axuz me-ha-morim xolim.
eighty percent from-the-teachers sick.pl
Eighty percent of the teachers are sick.

b. Sney SliS me-ha-morim xolim.
two.cs third from-the-teachers sick.pl
Two thirds of the teachers are sick.

c. xelek gadol/katan me-ha-morim xolim.
part big/small from-the-teachers sick
A large/small part of the teachers is sick.

More partitive quantifiers are given in (107). The noun *xaci* 'half', which is stressed on the final syllable, is usually pronounced as *xeci*, with stress on the first syllable, in colloquial speech.

(107) a. paxot mi-reva mi-
less from-quarter from
less than a quarter of

b. axuz katan me-
percentage small from
a small percentage of

c. xaci/xeci me-
half from
half of

d. bidyuk / paxot me- / yoter me- xeci me-
exactly / less from / more from half from
exactly / less then / more than half of

e. xamiSit / SiSit / Sminit me -
fifth / sixth / eighth from
a fifth / sixth / eighth of

A-Quantifiers

Proportional A-quantifiers in Hebrew are morphologically complex. Some examples are given in (108).

(108) a. ani la-rov noheg la-avoda.
I to.the-majority drive.1s to.the-work
I usually drive to work.

b. ani be-derex klal noheg la-avoda.
I in-way.cs rule drive to.the-work
I usually drive to work.

c. ani noheg la-avoda le-itim nedirot / rexokot / krovot .
I drive.1s to.the-work to-times rare.pl / far.pl / close.pl
I rarely / seldom / often drive to work.

d. ani harbe peamim noheg la-avoda
I many times drive.1s to.the-work
I often drive to work.

(109) be-derex klal / la-rov kSe ani ayef ani ocer ba-cad.
in-way.cs rule / to.the-majority when I tired.ms I stop.ms in.the-side
Usually when I'm tired I pull over.

(110) gvarim (hem) be-derex klal / la-rov yoter gvohim mi-naSim.
men (are) in-way.cs rule / to.the-majority more tall.pl from-women
Men are usually taller than women.

7.5 Follow Up Questions

7.5.1 Definite NPs

The definite article in Hebrew is the clitic *ha*. As mentioned earlier, definiteness is marked on the head noun as well as on all modifiers, as shown in (111).

(111) a. ha-xatul
the-cat
The cat

b. ha-xatul ha-Saxor
the-car the-black
The black cat

Definite cardinal quantifiers are formed with the construct state form of a cardinal determiner and a definite noun, as exemplified in (112-a). As mentioned in Section 7.1.2, the cardinal determiner can be floated, in which case it agrees with the head noun in person and number, as shown in (112-b).

(112) a. SloSet ha-xatulim Sxorim
three.cs.m the-cats black.mpl
The three cats are black.

b. ha-xatulim SloStam Sxorim
the-cats three.cs.3mpl black
The cats are all three of them black.

Demonstratives

The Hebrew demonstratives are masculine *ze* and feminine *zot* (alternate form *zoti*, possibly a contraction from *zot* + *hi* 'be.f') in the singular, and *ele* (with alternate form *elu* in formal registers) in the plural. Demonstratives are here glossed as DEM. They can occur on their own, as in (113).[7]

(114) a. ze ha-sefer Se-katavti.
DEM the-book that-wrote.1s
This/that is the book I wrote.

b. zot ha-kos Se-Savarti.
DEM the-cup that-broke.1s
This/that is the cup I broke.

c. ele ha-sfarim Se-bikaSta.
DEM the-book.ms that-requrest.2ms
These are the books you asked for.

[7] Demonstratives are also used in copular clauses such as (113-a,b). The status of these constructions is controversial (Sichel 1997, Doron 1983, Hazout 1994, Fuerst 2007).

(113) a. Dani ze ha-xaver haxi tov Seli.
Dani DEM the-friend most good of.1s
Dani is my best friend.

b. xatul zot xaya mafxida.
cat DEM animal scary
A cat is a scary animal.

Adnominal demonstratives distinguish distal and proximal forms. The former are formed by appending the definite article to a demonstrative. The latter by appending the definite article to a nominative pronoun. This is summarized in (115). Examples of demonstratives are given in (116).

(115) **Adnominal demonstratives**

proximal	
sg.	pl.
m. ha-ze	ha-ele (ha-elu)
f. ha-zot (ha-zoti, ha-zu)	
distal	
m. ha-hu	ha-hem
f. ha-hi	ha-hen

(116) a. ha-iSa ha-zot/zoti (hi) ima Seli.
the-woman the-this.f (is.f) mother of.1s
This woman is my mother.

b. ha-studentim ha-ele (hem) xaxamim
the-students the-these (are.pl) smart.mpl
These students are smart.

c. ha-studentim ha-hem (hayu) xaxamim.
the-students the-those (were.pl) smart.plm
Those students were smart.

In more formal varieties, bare demonstratives can occur adnominally, in which case they have both proximal and distal readings. This is not possible with the pronouns that form the basis for distal adnominal demonstratives (117-c).

(117) a. iSa zot/zu
woman this.f
This/that woman

b. studentim ele
students these
These/those students

c. *studentim hem
students those
Those students

Possessives

Since spoken Hebrew has mostly lost the construct state as a productive grammatical construction, it has only one way of forming nominal possessives, using the preposition *Sel* 'of'. Possessive NPs can be definite, as in (118-a), or indefinite as in (118-b). The non-productivity of the construct state in modern Hebrew is evidenced by the fact that neither of the NPs in (118) have construct state alternates.

(118) a. ha-studentim Sel Tanya
the-students of Tanya
Tanya's students

b. studentim Sel Tanya
students of Tanya
Students of Tanya's

A possessive NP can have quantified NPs on both sides of the preposition *Sel*. Some examples of quantified possessives are given in (119). In these sentences, the possessor quantifier is interpreted as outscoping the quantifier over things possessed (though there are cases where scoping is ambiguous, as in (86) above).

(119) a. ha-mexonit/mexoniyot Sel rov ha-morim Sxora/Sxorot.
the-car/cars of majority.cs the-teachers black.f/black.fpl
Most teachers' car/cars is/are black.

b. kol mexonit Sel kol more nigneva.
all car of all teacher was.stolen.3fs
Every car of every teacher was stolen.

c. kim'at kol ha-mexoniyot Sel kama morim Sxorot.
almost all the-cars of some teachers black.pl
Almost all of some teachers' cars are black.

There seem to be restrictions on the cooccurrence of quantifiers in possessive NPs, though their exact nature is not clear to us. For example, for at least some speakers, a cardinal quantifier in the possessed NP position requires a partitive structure.

(120) a. ??le-faxot SaloS mexoniyot Sel harbe morim Sxorot.
to-less three.f cars of many teachers black.fpl
Intended: At least three of many teachers' cars are black.

b. le-faxot SaloS me-ha-mexoniyot Sel harbe morim Sxorot.
to-less three.f from-the-cars of many teachers black.fpl
Intended: At least three of many teachers' cars are black.

(121) a. ??kama amudim Sel rov ha-sfarim kruim.
some pages of majority.cs the-books torn.mpl
Intended: Some of many books' pages are torn.

b. kama me-ha-amudim Sel rov ha-sfarim kruim.
some from-the-pages of majority.cs the-book.mpl torn.pl
Intended: Some of many books' pages are torn.

Furthermore, there are restrictions on the distribution of *n-words* in possessives. Some examples are given in (122). More discussion is found in Section 7.5.13.

(122) a. ??**ha-mexoniyot** Sel **af more** lo Sxorot.
the-cars of any_c teacher neg black.fpl
Intended: No teacher's car(s) is/are black.

b. ??**kol ha-mexoniyot** Sel **af more** lo Sxorot.
all the-cars of any_c teacher neg black.fpl
Intended: No teacher is such that all of her cars are black.

c. ***kol mexonit** Sel **af more** lo Sxora.
every car of any_c teacher neg black.fs
Intended: No teacher is such that every car of hers is black.

d. **af mexonit** Sel **af more** lo Sxora.
any_c car of any_c teacher neg black.fs
No teacher's car is black.

e. ***af mexonit** Sel **kol more** lo Sxora.
any_c car of all teacher neg black.fs
Intended: None of every teacher's cars are black.

f. ***af mexonit** Sel **rov ha-morim** lo Sxora.
any_c car of majority.cs the-teachers neg black.fs
Intended: None of most teacher's cars are black.

7.5.2 Generic NPs

In Hebrew, both bare singulars and bare plurals can be interpreted generically (Doron 2003).

(123) a. dvora (lo) okecet.
bee (neg) stings.fs
Bees (don't) sting.

b. dvora okecet?
bee stings.fs
Do bees sting?

c. dvorim (lo) okcot.
bees (neg) sting.fpl
Bees (don't) sting.

As Doron shows, Hebrew bare singulars can name kinds, unlike English bare singulars.

(124) namer hitpateax mi-xatul.
tiger developed.3sm from-cat
The tiger developed from the cat. (cf. *A tiger developed from a cat* which has no kind reading).

Definite NPs, both plural and singular, can also refer to kinds.

(125) a. ha-namer hu yonek.
the-tiger be.m mammal
The tiger is a mammal.

b. ha-nemerim yikaxdu tox Sana.
the-tigers will.become.extinct.pl inside year
The tiger will become extinct within a year.

7.5.3 Morphological Complexity of Quantifiers

Monomorphemic A-Quantifiers

(126) a. *tamid* 'always'
b. *paam* 'once'
c. *harbe* 'often'
d. *male* 'very often'
e. *hamon* 'very often'

Multimorphemic A-Quantifiers that are a single phonological word

(127) a. *lifamim* 'sometimes'
b. *me/le-olam* 'never'
c. *la-rov* 'usually'

Monomorphemic D-Quantifiers

(128) a. *rov* 'majority of'
b. *kol* 'all/every/each/any'
c. *marbit* 'most'
d. *exad* 'one'
e. *harbe* 'many'
f. *male* 'many'
g. *hamon* 'very many, tons (of)'
h. *meat* 'few'
i. *af* / *Sum* 'any$_c$', 'any$_m$'
j. *maksimum* 'maximum'
k. *minimum* 'minimum'

Thus, Hebrew has a monomorphemic determiner *all*, as well as a monomorphemic *one*. However, Hebrew has only one monomorphemic universal quantifier. Whether or not Hebrew has a monomorphemic proportional determiner

is not entirely clear, and depends on how one analyzes words like *rov* 'most', discussed in Section 7.4.

Hebrew has several mononomorphemic quantifiers translating *many*. There is no monomorphemic *no*.

7.5.4 Selectional Restrictions

As mentioned above, the proportional *rov* cannot occur with a bare noun but requires a definite NP complement. If the common noun is count, then quantification is over individuals when the noun is plural (129-b), and over parts of individuals when it is singular (129-c).

(129) a. *rov yeled
majority.cs child
*Most child

b. rov ha-yladim yeSenim
majority.cs the-boy.mpl sleep.mpl
Most of the children are sleeping.

c. rov ha-Sulxan naki
majority.cs the-table clean
Most of the table is clean.

The universal *kol* can occur with either a bare singular or a definite plural noun.

(130) a. kol yeled
all child
Every / each / any child

b. kol ha-yladim
all the-boy.mpl
Every child / all the children.

All cardinals greater than one generally require a plural complement. However, in some cases singular complements are also possible. It is not clear to us what exactly licenses such singular complements. Intuitively, they seem to occur in NPs that are not thematic arguments of their predicates, but which instead act as measure or extent phrases.

(131) a. hayu Sam Slosim yeled.
were.pl there thirty child
There were thirty children there.

b. bney yisrael nadedu arbaim Sana.
sons.cs Israel wandered.pl forty year
The Israelites wandered for forty years.

c. karati kvar SloSim amud.
read.1s already thirty page
I read already thirty pages.

The value cardinals *harbe* 'many' and *meat* 'few' take a bare plural complement (132), or a definite complement in the partitive construction (133). Partitives are discussed in Section 7.5.9.

(132) a. harbe yeladim
many children
Many children

b. meat yeladim
few children
Few children

(133) a. harbe me-ha-yladim
many from-the-boy.mpl
Many of the children

b. meat me-ha-yeladim
few of-the-boy.mpl
Few of the children

7.5.5 Decreasing NPs

Decreasing NPs were described above, and some examples are repeated here.

(134) a. paxot mi-SloSa anaSim
less from-three people
Less than three people

b. lo kol yeled
not all child
Not every child

c. paxot mi-reva mi-ha-yladim
less from-quarter from-the-children
Less than a quarter of the children

d. af yeled
any$_c$ boy
No boy

Decreasing NPs license the NPI *ey-paam*, discussed in Section 7.2.9, as exemplified in (135). It seems that this expression is subject to the same anti-locality constraint described by Csirmaz and Szabolcsi (Chapter 8, this volume) for Hungarian: *ey-paam* cannot occur in the same minimal clause with explicit negation, hence the ungrammaticality of (135-c,d).

(135) a. paxot mi-SloSa anaSim ra'u ey-paam et elohim.
less from-three people saw.pl ever acc God
Less than three people ever saw God.

b. paxot mi-reva mi-ha-yldaim ra'u ey-paam
less from-quarter from-the-children saw.pl ever
et elohim.
acc God
Less than a quarter of the children ever saw God.

c. *af yeled lo ra'a ey-paam et elohim.
any$_c$ boy neg saw ever acc. God
No boy has ever seen God.

d. *lo kol yeled ra'a ey-paam et elohim.
neg all boy saw ever acc. God
Not every child ever saw God.

7.5.6 Boolean Compounds

Boolean compounds of D-quantifiers were described in Section 7.2.6. Examples of compounds of A-quantifiers are in (136).

(136) a. nahagti la-avoda le-faxot paamayim aval lo yoter mi-Ses
drove.1sg to.the-work to-less twice but neg more from-six
peamim.
times
I drove to work at least twice but no more than six times.

b. dani hicbia ba-bxirot la-rov aval lo tamid
Dani voted.ms in.the-elections to.the-majority but neg always
la-smol.
to.the-left
Dani usually but not always voted for the left in the elections.

7.5.7 Exceptives

Some exceptives were described in Section 7.3 above. As described there, they involve the form *xuc mi-* or *milvad*. The examples in (137) show that there is no reason to assume these expressions to form a constituent with the determiner.

(137) a. xuc mi-dani bau Slosim anaSim.
outside from-Dani came.pl thirty people
Except for Dani thirty people came.

b. bau milvad dani SloSim anaSim.
came.pl except Dani thirty people
Except for Dani thirty people came.

In more formal registers, Hebrew has another exceptive, *ela*, which is only licensed under negation.

(138) a. *(lo) raiti ela et yosi.
neg saw.1s ela acc. yosi
I saw nobody except Yosi.

b. *(lo) axalti ela gezer.
neg ate.1s ela carrot
I ate nothing but carrots.

ela cannot occur with a matrix subject NP.

(139) *ela yosi lo axal.
ela yosi neg ate.3ms
Intended: Nobody except Yosi ate.

(140) a. I saw but one man.
b. *But one man arrived.

The lexemes *yeter* and *S'ar*, both meaning 'rest of' or 'rest', exhibit a problem similar to the one discussed for *rov* 'most' in Section 7.4. As with *rov*, these lexemes have clear uses as nouns (141-c), as well as uses that seem more determiner-like (141-a,b). When they occur as determiners, they do not trigger agreement on the main predicate, unlike construct state nouns.

(141) a. yeter / S'ar ha-studentim nixSelu.
rest.of the-student.mpl failed.3mpl
The rest of the students failed.

b. Dani avar. kol [yeter / S'ar] ha-studentim nixSelu.
Dani passed.3mpl all rest the-student.mpl failed.3mpl
Dani passed. All the rest of the students failed.

c. Dani avar. kol ha-[yeter / S'ar] nixSelu.
Dani passed.3mpl all the-rest failed.3mpl
Dani passed. All the rest failed.

d. kax exad ve-ten li et ha-[yeter / S'ar].
take.IMP.2ms one and-give.IMP.2ms acc. the-rest
Take one and give me the rest.

7.5.8 Only

The expressions for 'only' is *rak* and the higher register *bilvad*. *bilvad* is, historically, morphologically complex. It is related to the exceptive *milvad*. Both seem to be derived from the adjective *levad* 'alone' and a preposition, *be-* 'in' and *mi-* 'from' respectively, tough we do not know their actual etymology. Synchronically, both are simple forms.

(142) a. rak Dani ba.
only Dani came.ms
Only Dani came.

b. dani bilvad ba.
dani only came.ms
Only Dani came.

c. rak studentim kiblu hanaxa.
only students got.3pl reduction
Only students got a reduction.

d. studentim bilvad kiblu hanaxa.
students only got.3pl reduction
Only students got a reduction.

(143) a. axalti rak SloSa tapuxim.
ate.1s only three.m apple.mpl
I ate only three apples.

b. axalti SloSa tapuxim bilvad.
ate.1s three.m apple.mpl only
I ate only three apples.

7.5.9 Partitives

Hebrew has syntactically complex partitive quantifiers. Proportional partitives were described in Section 7.4. The determiner in a partitive may also be cardinal, interrogative, or negative.

(144) a. Snayim me-ha-studentim
two from-the-student.mpl
Two of the students

b. harbe me-ha-studentim
many from-the-student.mpl
Many of the students

c. eyze me-ha-studentim?
which from-the-student.mpl?
Which of the students?

d. af exad me-ha-studentim
n1 one from-the-student.mpl
None of the students

e. xaci me-ha-studentim
half from-the-student.mpl
Half of the students

The universal determiner *kol* cannot on its own occur in a partitive structure, but it can do so as part of the complex *kol exad* 'every one'. The resulting quantifier is distributive. (Other distributive readings induced by *kol exad* are described in Section 7.5.14).

(145) kol exad me-ha-studentim
all one from-the-student.mpl
Each one of the students

It is possible that Hebrew has morphologically simple partitives, namely *rov* 'most' and *marbit* 'most', described in Section 7.4, and *yeter* 'rest' and *S'ar* 'rest', in Section 7.5.7. However, as discussed, this depends on whether these lexemes are to be analyzed as determiners or as construct state nouns.

7.5.10 Quantifiers Functioning as Predicates

Only cardinal determiners can be predicative.

(146) a. ha-studentim hayu rabim.
the-students be.3pl many.pl
The students were numerous.

b. anaxnu SloSa.
we three.m
We are three.

c. *anaxnu kol / rov.
we all / most
*We are all / most.

However, quantifiers formed from universal and proportional determiners can also be used predicatively.

(147) a. anaxnu kol ha-kvuca.
we all the-team
We are the entire team.

b. ele rov ha-klafim.
these most the-cards
These are most of the cards.

c. ha-yladim Seli hem Sney SliS me-ha-kita.
the-children of.1s be.pl two.cs third from-the-class
My children are two thirds of the class.

7.5.11 Determiners Functioning as NPs

Universal and proportional determiners cannot function as NPs.

(148) ha-anivot hayu yekarot az kaniti Stayim / harbe / meat / kama
the-ties were.pl expensive.pl so bought.1s two / many / few / some
/ *rov / *kol.
/ *most / *all
The ties were expensive so I bought two / many / few / some / *most / *all.

For the determiners *kol* and *rov* to function as NPs they must occur in the construct state with inflection marking the person, gender and number of the noun that denotes their domain.

(149) ha-anivot hayu yekarot az kaniti et ruban /
the-ties were.pl expensive.pl so bought.1s acc. most.cs.3fpl /
kulan.
all.cs.3fpl
The ties were expensive so I bought most / all of them.

7.5.12 Distribution

Quantified NPs can occur in all grammatical functions.

(150) a. SloSa anaSim ba'u.
three.m people came
Three people came.

b. raiti SloSa anaSim.
saw.1s three.m people
I saw three people.

c. aniti al kol Se'ela.
answered.1s on all question
I answered every question.

d. natati SloSa sfarim le-kol yeled.
gave.1s three.m book.mpl to-all child
I gave three books to every child.

e. rov ha-mafginim ne'ecru.
majority.cs the-demonstrator.mpl were.arrested.3pl
Most demonstrators were arrested.

f. Sney ha-horim Sel kol mafgin ne'ecru.
two.cs the-parents of every demonstrator were.arrested.3pl
Every demonstrator's two parents were arrested.

As in English, overtly negated NPs are better in subject position than in other positions.

(151) a. lo kol student ana al kol se'ela.
neg all student answered on every question
Not every student answered every question.

b. *kol student ana al lo kol Se'ela.
every student answered.3sm on neg all question
*Every student answered not every question.

c. *natati le-lo kol student sefer.
gave.1s to-neg every student book
*I gave not every student a book.

d. ??kol yeled lo axal af tapuax.
all boy neg ate.3sm any$_c$ apple
??Every boy ate no apple.

e. af yeled lo axal kol tapuax.
any$_c$ boy neg ate.3sm every apple
No boy ate every apple.

7.5.13 Scope Ambiguities

When a predicate has two or more quantified NP arguments, scope ambiguities arise. (152) has both a subject wide scope (SWS) and an object wide scope (OWS) reading, though OWS seems to us preferred.

(152) orexet axat kar'a kol tyuta.
editor one.f read.3fs all draft
One editor read every draft.

When the co-intersective determiner *kol* has a definite plural complement, the SWS reading is very strongly preferred.

(153) orexet axat kar'a et kol ha-tyutot.
editor one.f read.3sf acc. all the-drafts
One editor read all the drafts.

In (154), the collective reading and SWS readings are prominent. OWS is harder to get.

(154) SaloS morot badku mea bxinot.
three.f teachers.f check.3pl hundred exams
Three teachers graded a hundred exams.

In (156), the SWS reading is most prominent.

(155) harbe morot badku mea / et kol ha- bxinot.
many teachers.f checked.3plf hundred / acc. all the- exams
Many teachers read a hundred / all the exams.

The expression *kol exad*/*axat* forces distributive readings.

(156) harbe morot badku kol axat mea / et kol ha- bxinot.
many teachers.f checked.3fpl all one.f hundred / acc. all the- exams
Many teachers each read a hundred / all the exams.

For cardinals, including modified numerals, in object position, narrow scope is strongly preferred, though a wide scope reading is also possible for some speakers. The OWS reading is readily available if the object NP is stressed.

(157) a. kol student kara le-faxot maxaze exad Sel levin.
all student read.3ms to-less play one of Levin
Every student read at least one play by Levin.

b. kol student kara SloSa maxazot Sel levin.
all student read.3ms three.m play of Levin
Every student read three plays by Levin.

The following examples show the scope possibilities in *wh*- questions.

(158) a. eyze student ana al haxi harbe Se'elot? (SWS)
which student answered.3ms on most many question.fpl?
Which student answered the most questions?

b. eyze student ana al kol ha-Se'elot? (SWS)
which student answered.3ms on all the-question.fpl?
Which student answered all the questions?

c. eyze student ana al kol Se'ela? (SWS/OWS)
which student answered.3ms on all question?
Which student answered every question?

(159) a. al eyze Se'ela ana kol student? (SWS/OWS)
on which question answered.3ms every student
Which question did every student answer?

b. al eyze Se'elot ana kol student? (SWS/OWS)
on which questions answered.3ms every student
Which questions did every student answer?

(160) a. al eyze Se'ela anu kol ha-studentim? (SWS/OWS)
on which question answered.3pl all the-student.mpl?
Which question did all the students answer?

b. al eyze Se'ela kol ha-studentim anu? (SWS)
on which question all the-student.mpl answered.3pl?
Which question did all the students answer?

c. al eyze Se'elot anu kol ha-studentim? (SWS)
on which questions answered.3pl all the-student.mpl?
Which questions did all the students answer?

d. al eyze Se'elot kol ha-studentim anu? (SWS)
on which questions all the-student.mpl answered.3pl ?
Which questions did all the students answer?

Self-Embedding QNPs

As discussed in Section 7.5.1 above, in self-embedding QNPs such as quantified possessives, the possessor NP tends to take scope over the possessed NP. However, if the embedded NP consists of *kol* 'each' followed by a singular noun, it scopes over the whole QNP.

(161) Sney xaverim Sel kol sar
two.cs friends of each minister
Two friends of each minister
*TWO x: x IS A FRIEND OF EACH MINISTER
FOR EVERY MINISTER x: TWO FRIENDS OF x.

In (162), with a relational noun, narrow scope for the possessor is strongly preferred, though (163) shows that given enough context, wide scope is also possible when the determiner is stressed.

(162) ima Sel kol ha-sarim
mother of al the-ministers
All the ministers' mother
THE x: x IS THE MOTHER OF ALL THE MINISTERS
??FOR EVERY MINISTER x, x'S MOTHER.

(163) A: ima Sel sar ha-bri'ut gara be-xul.
mother of minister.cs the-health lives.sf in-abroad
The health minister's mother lives abroad.

B: ima Sel KOL ha-sarim gara be-xul.
mother of all the-monisters lives.sf in-abroad
ALL ministers' mothers live abroad.
FOR EVERY MINISTER x: x'S MOTHER LIVES ABROAD.

As mentioned in Section 7.5.1, there are restrictions on the cooccurrence of QNPs in possessives which have to do with negation. When the possessed NP is an *n-word*, it can cooccur naturally with a referential possessor NP, as in (164-a). It can also cooccur naturally with another *n-word* in the possessor, as in (164-b). However, it cannot cooccur with a QNP, as the examples in (164-c,d) show. (164-d) is marginally possible if the possessor NP receives narrow scope, but as mentioned earlier, narrow scope for *kol* + singular NP, interpreted as 'each', is difficult to get.

(164) a. af xaver Sel dani lo ba.
any$_c$ friend of Dani neg came.3ms
None of Dani's friends came.

b. af xaver Sel af yeled lo ba.
any$_c$ friend of any$_c$ boy neg came.3ms
None of any boy's friends came.

c. *af xaver Sel harbe yladim lo ba.
any$_c$ friend of many boys neg came.3ms
?? None of many boys' friends came.

d. *af xaver Sel kol yeled lo ba.
neg$_c$ friend of every child neg came.3ms
Intended: Every boy is such that none of his friends came.
Marginally possible: NO x SUCH THAT x IS A FRIEND OF EACH BOY CAME.

Similarly, the possessor NP cannot be an *n*-word unless the possessed NP is also an *n*-word (as in (164-b)).

(165) a. ??kol xaver Sel af yeled lo ba.
all friend of any$_c$ boy neg came.3ms
Intended: No boy is such that every friend of his came.

b. ??rov ha- / harbe / SloSa xaverim Sel af yeled lo bau.
majority.cs the- / many / three.m friends of any$_c$ boy came
Intended: No boy is such that most / many / three of his friends came.

In short, the generalization seems to us to be that within a possessive NP, an *n*-word cannot, or cannot easily, cooccur with a QNP.

Ambiguity Between Nominal and Verbal Quantifiers

Many verbal and nominal quantifiers can scope freely.

(166) a. Sney yeladim Saru kol paam.
Two boy.mpl sang.3pl every time
Two children sang every time.
FOR TWO CHILDREN x: x SANG EVERY TIME
FOR EVERY TIME t, TWO CHILDREN SANG AT t

b. kol ha-yladim Saru paamayim.
all the-boy.mpl sang.3pl time.dual
All the children sang twice.
FOR ALL CHILDREN x: x SANG TWICE
FOR TWO TIMES t, ALL CHILDREN SANG AT t

When the nominal quantifier is *kol* followed by a singular noun, i.e. on its interpretation as 'each', it preferably has wide scope.

(167) kol yeled Sar paamayim.
each boy sang.3ms time.dual
Each child sang twice.
FOR EACH CHILD x: x SANG TWICE
??FOR TWO TIMES t, ALL CHILDREN SANG AT t

Scope in Existentials

In an existential, the pivot NP tends to scope below any QNP in the coda (Kuno 1971, Francez 2007, 2009)

(168) yeS Sney kursim kol yom.
EX two.cs course.mpl all day
There are two classes every day
FOR EVERY DAY d, THERE ARE TWO CLASSES ON d
FOR TWO CLASSES c, c TAKES PLACE EVERY DAY.

7.5.14 Distributivity

The expression *kol exad/axat* mentioned in Section 7.5.9 can occur following a verb to yield a distributive reading of the subject.

(169) a. ha-xayalim hexziku kol exad Stey xanitot.
the-soldier.mpl held.3pl all one two.cs. spears.
The soldiers held two spears each.

b. SloSa xayalim hexziku kol exad Stey xanitot.
three soldier.mpl held.3pl all one two.cs. spears.
Three soldiers held two spears each.

Another form of distributivity can be achieved by reduplication, either of a numeral or of a common noun. In (170), not only is one of the arguments distributed, but there is an (uncancellable) implication that the different events involved happen in temporal sequence. This implication is not present with stative predicates, as shown in (171). For example, in (171-b), there is no requirement that the songs became great in sequence. Reduplication with stative predicates is only possible with the numeral *one*.

(170) a. ha-yladim nixnesu exad exad / Snayim Snayim la-kita.
the-children entered.3pl one one / two two to.the-class
The children entered the class one by one / two by two.

b. ha-rofa badka et ha-yldaim exad exad / Snayim
the-doctor examined.3fs acc. the-children one one / two
Snayim / yeled yeled
two / boy boy
The doctor examined the children one (boy) at a time / two at a time.

c. ha-xayot nixnesu la-teva zugot zugot.
the-animals entered.3pl the-arc couples couples
The animals entered the arc one pair at a time.

(171) a. ha-mexoniyot hayu dfukot axat axat.
the-cars were.pl crappy one one
The cars were all crappy.

b. ha-Sirim Sela me'ulim exad exad.
the-songs of.3fs good.pl one one
Her songs are all great.

7.5.15 Count and Mass

The determiner *kol* cannot combine with mass nouns and can combine with a bare count noun only when the noun is singular (except for the NPI used of *kol* mentioned in Section 7.3).

(172) a. kol yeled
all child
Every child

b. *kol yeladim
all children
Every children

c. *kol sukar
every sugar
*Every sugar

Numerals can combine with plural count nouns but not mass nouns.

(173) a. Sney yladim
two.cs children
Two children

b. *Sney sukar
two.cs sugar
Two sugar (Possible only on conventional reading, e.g. two spoonfuls.)

The determiners in (174) can combine with both plural count nouns and mass nouns.

(174) a. *kama*? 'how many'?
b. *harbe* 'many/much'
c. *me'at* 'few/little'

In more formal varieties, the adverbial *kcat* 'a little' combines with mass but not count nouns. However, in spoken varieties this restriction is not maintained. Thus, examples like (175) would be considered ungrammatical by prescriptivist grammarians, but are abundant in informal spoken and written registers. (176) shows *kcat* in its adverbial use.

(175) ba'u rak kcat anaSim.
came.3pl only a.little people
Only a few people came.

(176) ani kcat ayefa.
I a.little tired.f
I am a little tired.

7.5.16 The Indexing Function of Universal Quantifiers

The domain of the universal quantifier *kol* (or *kol* + *numeral*, (177-c)) can be used as an index set for the enumeration of another set. No other quantifier is possible in this kind of construction.

(177) a. yoter (ve-yoter) anaSim konim subaru kol Sana.
more (and-more) people buy.pl Subaru every year.
More (and more) people buy Subarus each year.

b. al kol ben adam Se-met noldaim xamiSa.
on every son.cs human that-die.sm born.mpl five.m
For every death there are five births.

c. al kol SloSa anaSim Se-metim nolad exad.
on every three.m people that-die.pl born.ms one
For every three deaths there is one birth.

An effect similar to that of (177-a) can be achieved by adverbials, as in the following examples.

(178) a. yoter anaSim konim subaru ba-Sanim ha-axronot.
more people buy.3pl Subaru in.the-years the-last.pl
More people buy Subarus in recent years.
For each recent year *n*, the number of subarus bought during *n* is larger or equal to the number of Subarus bought the previous year.

b. mi-Sana le-Sana yoter anaSim konim subaru.
from-year to-year more people buy.3pl Subaru
From year to year, more people buy Subarus.

c. ke-xol Se-nos'im daroma yeS paxot ecim.
as-all that-go.pl south EX less tree.mpl
There are less and less trees as you go south.

Rate Phrases

(179) a. ha-rakevet nosaat arba-meot kilometer le-Saa.
the-train travels.3fs four-hundreds kilometer to-hour
The train goes 400 km/hr.

b. ani rac esrim kilometer be-/le-yom.
I run.sm twenty kilometer in-/to-day
I run 20 km a day.

c. Dan roxec panim SaloS peamim be-yom / kol yom.
Dan wash.sm face three.f times in-day / all day
Dan washes his face three times a day / every day.

7.5.17 Type ⟨2⟩ Quantifiers

(180) a. eze studentim anu al eze Se'elot?
which student.mpl answered.3pl on which question.fpl?
Which students asked which questions?

b. kol ha-studentim anu al otan Se'elot.
all the-student.mpl answered.3pl on same.f question.fpl
All the students answered the same questions.

c. kol student ana al Se'ela axeret.
all student answered.3ms on question other.f
Each student answered a different question.

(181-a) says that not all students answered the same questions. It does not require that no two students answer the same question. Similarly, (181-b) says only that the judges were not all in agreement about the conclusions.

(181) a. studentim Sonim anu al Se'elot Sonot.
student.mpl different.plm answered.3pl on question.fpl different.plf
Different students answered different questions.

b. Softim Sonim hesiku maskanot Sonot
judge.mpl different.plm drew.3pl conclusion.fpl different.f
me-oto ti'un.
from-same.m argument
Different judges drew different conclusions from the same argument.

(182) a. dani ve-rut xayim be-xadarim nifradim (be-oto bayit).
Dani and-Rut live.pl in-room.mpl separate.pl (in-same.m house)
Dani and Rut live in separate rooms (in the same house).

b. kol ha-miStatfim lavSu anivot be-oto ceva.
all the-participants wore.3pl ties in-same.m color
All the participants wore the same color ties.

c. dan rakad im rut aval af exad axer lo rakad
Dan danced.3ms with Rut but any$_c$ one other.m neg danced.3sm
im af exad.
with any$_c$ one
Dan danced with Rut but no one else danced with anyone else.

Hebrew does not have equivalents to the English sentences in (183).

(183) a. Some cars are faster than others.
b. Some girls' mothers are bigger than other girls' mothers

To express these sentences in Hebrew, one of several possible periphrastic constructions is required. Possible translations of (183-a) are shown in (184), and of (183-b) in (185).

(184) a. lo kol ha-mexoniyot mehirot be-ota mida.
neg all the-car.fpl fast.pl in-same.f measure
Not all cars are fast to the same degree.

b. yeS mexoniyot yoter mehirot ve-paxot mehirot.
EX car.fpl more fast.fpl and-less fast.fpl
There are faster and slower cars.

(185) lo le-kol ha-banot yeS ima be-oto godel.
not to-all the-girls EX mother in-same.m size
Not all girls have the same size mother.

7.5.18 Type $\langle\langle \mathbf{1}, \mathbf{1}\rangle, \mathbf{1}\rangle$ *Quantifiers*

Comparative D-Quantifiers

Comparative D-quantifiers in Hebrew have the same distribution as other QNPs, with the exception of possessive NPs.

(186) a. yoter / paxot banim mi-banot bau.
more / less boy.mpl from-girl.fpl came.3pl
More/ less boys than girls came.

b. axalti yoter tapuxim mi-bananot.
ate.1s more apple.mpl from-banana.fpl
I ate more apples than bananas.

c. dibarti im yoter / paxot banim mi-banot
talked.1s with more / less boy.mpl from girl.fpl
I talked to more / less boys than girls.

d. ani maxSiv yoter banim mi-banot le-xaverim Seli.
I consider more boy.mpl from-girl.fpl to-friends of.1s
I consider more boys than girls friends.

In a possessive NP, comparatives are somewhat marginal.

(187) a. ? ha-kelev Sel yoter banim mi-banot barax.
the-dog of more boys from-girls escaped
More boys' than girls' dog escaped.

b. ??ha-yladim Sel yoter amerikaim mi-germanim miStamSim
the-child.mpl of more Americans from-Germans use.pl
be-samim.
in-drug.mpl
The children of more Americans than Germans take drugs.

To express the meaning of the English determiner *as many* ... *as* Hebrew employs a locution meaning literally 'the same number as'.

(188) a. yeS le-faxot oto mispar Sel banim ve-banot ba-kita.
EX to-less same.m number of boy.mpl and-girl.fpl in.the-class
There are at least as many boys as girls in the class.

b. yeS le-faxot oto mispar Sel banim ba-kita kmo Sel banot.
EX to-less same.m number of boys in.the-class as of girls
There are at least as many boys as girls in the class.

c. yeS bidyuk oto mispar Sel toSavim po kmo be-italya
EX exactly same.m number of resident.mpl here as in-Italy
There is exactly the same number of residents here as in Italy.

References

Barwise, Jon, and Robin Cooper. 1981. Generalized quantifiers and natural language. *Linguistics and Philosophy* 4:159–219.

Berman, Ruth A. 1978. *Modern Hebrew structure*. Tel Aviv: University Publishing Projects.

Danon, Gabi. 2001. Syntactic definiteness in the grammar of Modern Hebrew. *Linguistics* 39(6):1071–1116.

Danon, Gabi. 2008. Definiteness spreading in the Hebrew construct state. *Lingua* 118 (7):872–906.

Doron, Edit. 1983. *Verbless predicates in Hebrew*. Doctoral dissertation. Austin, TX: University of Texas.

Doron, Edit. 2003. Bare singular reference to kinds. In *Proceedings of SALT XIII*, eds. R. Young and Y. Zhou, 73–90. Ithaca, NY: CLC Publications.

Doron, Edit, and Ana Müller. 2011. *The cognitive basis of the mass-count distinction: Evidence from bare nouns*. Paper presented at LSALAA 2011: Workshop on languages with and without articles, Paris VIII.

Doron, Edit, and Anita Mittwoch. 1986. *Polarity-sensitive* kol *in Hebrew*. Lecture at the Second Annual Meeting of the Israel Association for Theoretical Linguistics, the Hebrew University of Jerusalem.

Eilam, Aviad. 2009. The crosslinguistic realization of -ever: Evidence from Modern Hebrew. In *Proceedings of CLS 43*, Vol. 2, eds. M. Elliott, J. Kirby, O. Sawada, E. Staraki, and S. Yoon, 39–53. Chicago, IL: Chicago Linguistic Society.

Falk, Yehuda. 2004. The Hebrew present-tense copula as a mixed category. In *Proceedings of the LFG 04 conference*, eds. M. Butt and T.H. King, 226–246. University of Canterbury, Christchurch: CSLI Publications, On-line.

Francez, Itamar. 2006. Semantic structure and argument realization in (mostly Hebrew) existentials. In *Proceedings of IATL 22*, ed. Y. Falk. http://atar.mscc.huji.ac.il/english/IATL//22/Francez.pdf.

Francez, Itamar. 2007. Quantification in the coda of existentials. In *Proceedings of the 16th Amsterdam Colloquium*, eds. M. Aloni, P. Dekker, and F. Roelofsen. University of Amsterdam. http://www.illc.uva.nl/AC/AC2007/index.php%3Fpage=15.html

Francez, Itamar. 2009. Existentials, predication, and modification. *Linguistics and Philosophy* 32(1):1–50.

Fuerst, Yael. 2007. Information structure and the Hebrew ze-ø alternation. In *Proceedings of CLS 43*, Vol. 2, eds. M. Elliot, J. Kirby, O. Sawada, E. Staraki, and S. Yoon, 71–82. Chicago, IL: Chicago Linguistic Society.

García Álvarez, Iván. 2009. *Generality and exception: A study in the semantics of exceptives*. Ph.D. thesis, Stanford University, Standford, CA.

Glinert, Lewis. 2004. *The grammar of Modern Hebrew*. Cambridge: Cambridge University Press.

Hazout, Ilan. 1994. The Hebrew pronoun *ze* and the syntax of sentential subjects. *Lingua* (93):265–282.

Heller, Daphna. 2002. Possession as a lexical relation: Evidence from the Hebrew construct state. In *Proceedings of the 21st west coast conference in formal lingusitics*, eds. L. Mikkelsen and C. Potts, 127–140. Somerville, MA: Cascadilla Press.

Kagan, Olga, and Ilona Spector. 2008. Alternative semantics for the Hebrew determiner eyze. In *Proceedings of the 21st west coast conference in formal lingusitics*, eds. N. Abner and J. Bishop, 247–255. Somerville, MA: Cascadilla Press.

Keenan, Edward. 1987. A semantic definition of indefinite NP. In *The representation of (in) definiteness*, eds. E. Reuland and A. ter Meulen, 286–317. Cambridge, MA: MIT Press.

Kuno, Susumo. 1971. The position of locatives in existential sentences. *Linguistic Inquiry* 2(3):233–278.

Levy, Alissa. 2008. Hebrew negative polarity items *šum* and *af*. In *Current issues in generative Hebrew linguistics*, eds. S. Armon-Lotem, G. Danon, and S. Rothstein, 313–337. Amsterdam: John Benjamins.

Rothstein, Susan. 2009. Individuating and measure readings of classifier constructions: Evidence from Modern Hebrew. *Brill's Annual of Afroasiatic Languages and Linguistics* 1:106–145.

Shlonsky, Ur. 1991. Quantifiers as heads: A study of quantifier float in Hebrew. *Lingua* 84:159–180.

Sichel, Ivy. 1997. Two pronominal copulas and the syntax of Hebrew nonverbal sentences. In *Texas linguistic forum 38: The syntax and semantics of predication*, eds. R. Blight and M. Moosally, 295–306. Austin, TX: Department of linguistics, University of Texas.

Ziv, Yael. 1982. Another look at definites in existentials. *Linguistics* 18:73–88.