Quantifiers in Turkish

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List of Abbreviations Used

1–2–3	First, second and third persons
ABIL	Abilitative modality suffix *-Abil*
ABL	Ablative
ACC	Accusative
AOR	Aorist
CL	Classifier
COMIT	Comitative
COMP	Comparative *daha*
CONJ	Conjunction
COP	Copula
DAT	Dative
DET	Determiner
DIST	Distributive
EVID	Evidential
EX	Existential predicate *var*
GEN	Genitive
GER	Gerund
GM	Generalizing modality marker (Göksel and Kerslake 2004: pp. 85–86)
INF	Infinitive
IMP	Imperative
LOC	Locative
LV	Light verb

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SREL	Subject relative clause nominalizer
NEG	Negation
NEGEX	Negative existential *yok*
NMZ	Object relative and phrasal complement clause nominalizing suffix
NOM	Nominative
ONOM	Onomatopoeia
OPT	Optative
PASS	Passive
POSS	Possessive
P	Plural
PQ	Polar question particle
PRES	Present tense
PROG	Progressive
PST	Simple past
S	Singular
SUP	Superlative

1 Background Information About Turkish

This section contains facts about Turkish syntax, morphology and phonology that are relevant to understanding the examples given throughout this chapter.

1.1 Word Order

Turkish has unmarked Subject-Object-Verb word order and is otherwise a head-final language with few exceptions.[1] Sentence (1a) is an example of a postposition phrase, (1b) is that of a noun modified by an adjective, and (1c) is a simple sentence.

(1) a. Ali için (*Ali)
Ali for
for Ali

b. kırmızı araba (*kırmızı)
red car
red car

c. Can Ayşe-yi seviyor.
Can Ayşe-ACC loves
Can loves Ayşe.

[1]These exceptions arguably include *ki*, that introduces speech and attitude complements, *çünkü*, 'because,' and the indefinite article *bir*, under the analysis that it is an overt determiner.

Word order is flexible but not unconstrained. For instance, scrambling (moving) the complement to the right of the postposition in (1a) results in ungrammaticality, as does scrambling the adjective to the right of the noun in (1b). But all six permutations of the constituents in (1c) are grammatical.[2]

1.2 The Case System

The grammatical function of a nominal constituent is determined by its case, of which there are six: nominative, accusative, genitive, dative, locative and ablative[3] (Kornfilt 1997 p. 212, Göksel and Kerslake 2004 p. 154).

Non-specific direct objects are not overtly marked for the accusative, while specific direct objects are (Enç 1991). This alternation, called 'differential object marking,' is also visible with direct object quantifier phrases. With 'many' in (2a), the accusative can be expressed or omitted, but its expression is obligatory with 'every,' in (2b).

(2) a. Birçok bisiklet(-i) sat-tı-m.
many bike-ACC sell-PST-1S
I sold many (of the) bikes.

b. Her bisiklet*(-i) sat-tı-m.
every bike-ACC sell-PST-1S
I sold every bike.

This difference seems to be correlated with the observation that *her* is a trigger of the 'definiteness effect,' while *birçok* is not (Sect. 3.5).

Other cases have different functions in quantifier phrases. For instance, the genitive and the ablative mark the restrictor of partitive constructions and the locative marks the denominator of a fraction. Illustrations are provided in the relevant sections of this paper.

Within a complex noun phrase,[4] only the head noun is declinable, modifiers like adjectives, demonstratives and numerals are not.

[2]See Erguvanlı Taylan (1984) and Kural (1992) for properties of scrambling in Turkish. See also Kural (1997a) for arguments against an antisymmetric (Kayne 1994) analysis of Turkish phrase structure.

[3]The comitative is a seventh candidate and Kelepir (2001, p. 12) does list it as a case marker. However, its status is a matter of discussion, as it shares some syntactic and morpho-phonological properties with postpositions (Jaklin Kornfilt, personal communication, July 22, 2014.).

[4]By using the expression 'noun phrase,' I do not intend to make any claims about whether Turkish has a DP layer or not. For proposals against the presence of a DP layer in Turkish see Öztürk (2005) and Bošković and Şener (2014) for proposals in favor of it, as well as arguments against Öztürk's proposal, see Arslan-Kechriotis (2006) and Kornfilt (2007).

(3) Şu iki güzel modern heykel-e bak!
that two beautiful modern statue-DAT look
Look at those two beautiful modern statues!

1.3 Phonology at Morphological Interfaces

The surface forms of vowels in inflectional and derivational suffixes are regulated by vowel harmony. For instance:

(4) Can-a, Cem-e
Can-DAT Cem-DAT
to Can, to Cem

Lexically specified consonants surface in intervocalic environments between stem endings and suffix onsets.[5]

(5) Sıla-ya, Ayşe-ye
Sıla-DAT Ayşe-DAT
to Sıla, to Ayşe

In a morpheme's citation form, vowels subject to harmony are capitalized and underlying consonants are parenthesized. The dative morpheme, for instance, is cited as *-(y)A*.

1.4 Predication, Possession and Argument Drop

In general, subjects trigger person and number agreement on their predicate, and possessors on their possessum. Some postpositions, derived from possessive structures, also agree with their complement. Objects, however, do not trigger any agreement.

1.4.1 Predication

Turkish distinguishes between 'verbal' and 'copular' predication.[6] The difference is visible in (6a) and (6b) in the first person plural agreement morpheme.

[5]For an in-depth presentation of these and other morpho-phonological processes see Göksel and Kerslake (2004, pp. 14–25) and Kornfilt (1997, pp. 498–500, 512–513).

[6]About the copula in Turkish, see Kornfilt (1996a), Kelepir (2001), Enç (2004), Aygen (2009) and Sağ (2013).

(6) a. Verbal predication: verb roots
Ben gel-di-m. Biz gel-di-k.
I come-PST-1S we come-PST-1P
I came. We came.

b. Copular predication: adjectives and nouns
Ben hasta-y-ım. Biz hasta-y-ız.
I sick-COP-1S we sick-COP-1P
I am sick. We are sick.

Verbal predicates are negated with the bound morpheme *-mA* and copular predicates are negated with the particle *değil*.[7] In (7b), agreement is expressed on the negative morpheme instead of the predicate.

(7) a. Negated verbal predicate
Biz gel-me-di-k.
we come-NEG-PST-1P
We didn't come.

b. Negated copular predicate
Biz hasta değil-iz.
we sick NEG-COP.1P
We are not sick.

The line between what counts as 'verbal' and 'copular' predication is blurred by the existence of hybrid forms. Participles, for instance, can show 'copular agreement' alongside 'verbal negation,' in (8).

(8) Participles
Biz gel-mi-yor-uz.
we come-NEG-PROG-1P
We're not coming.

These distinctions are relevant to later sections where agreement properties of quantifier phrases and scopal interactions between quantifier phrases and negation are examined.

1.4.2 Possessives and Partitives

In genitive possessive phrases illustrated in (9), the possessor is marked for the genitive and the possessum is suffixed with a 'possessive' morpheme, glossed across the board as POSS.[8]

[7] For a recent analysis of *değil* see Yakut Kubaş (2015).

[8] The exact characterization of this morpheme is under debate. A desideratum for any attempt is to reconcile the observation that it resembles a third person agreement marker, as in (9), with the fact

(9) ben-im araba-m, masa-nın cila-sı. 117
1S-GEN car-1S.POSS table-GEN varnish-POSS
my car, the table's varnish.

This structure is used in quantifier phrases with the expression of a partitive meaning. The partitive phrase is suffixed with the agreement morpheme and its restrictor is in the genitive. 118 119 120

(10) Denizci-ler-in yarı-sı / denizci-nin bir-i sevin-ecek 121
sailor-P-GEN half-POSS sailor.S-GEN one-POSS rejoice-FUT.3S
Half of the sailors / some sailor will rejoice.

Possessors can productively be left unexpressed,[9] and possessive structures with unexpressed possessors also serve as partitives. In (11b), the restrictor of 'most' is silent. 122 123 124

(11) a. araba-m, cila-sı 125
car-1S.POSS varnish-POSS
my car, its varnish

b. Çoğ-u sevin-ecek. 126
many-POSS rejoice-FUT.3S
Most (of them) will rejoice.

Some of such quantifiers have relexicalized and occur as D-Quantifiers outside of possessive constructions. 127 128

(12) Çoğ-u / kim-i denizci sevin-ecek. 129
many-POSS / who-POSS sailor rejoice-FUT.3S
Most / some sailors will rejoice.

As a final observation, the restrictors of some partitives with agreement morphology occur in the ablative. 130 131

that it appears in noun-noun compounds, not shown here. For recent analyses, see Kharytonava (2011), Kunduracı (2013), and Erguvanlı Taylan and Öztürk Başaran (2014), as well as references therein.

[9]Subjects and objects can also be dropped, but they will not be of concern here. For a general discussion of dropped arguments and their licensing conditions, see Kornfilt (1984), Enç (1986) and Erguvanlı Taylan (1986). Additionally, see Öztürk (2002) for a claim about a possible reconsideration of Turkish as a non-*pro*-drop language, and Kornfilt (2007) and Şener and Takahashi (2010) for claims about asymmetries between silent subjects and objects.

(13) Denizci-ler-den iki-si sevin-ecek.
sailor-P-ABL two-POSS rejoice-FUT.3S
Two of the sailors will rejoice.

See Sect. 2.4.1 for further discussion of partitive structures.

1.5 Constituent Questions and Polar Questions

Turkish is a *wh-* in situ language where, unlike in English, *wh-* elements do not overtly move to the edge of their clause in order to take scope (though they can undergo other movement operations).

(14) Ali kim-i gördü?
Ali who-ACC saw
Who did Ali see?

Polar questions are constructed with the particle *mI* attached to the right of the predicate.[10]

(15) Ali geldi mi?
Ali came PQ
Did Ali come?

2 Core Quantifiers

2.1 Generalized Existential Quantifiers

2.1.1 D-Quantifiers

Numerals

Numerals generally combine with morphologically singular nouns, shown in (16a). Numeral phrases that denote a semantically plural entity are syntactically singular. This is in (16b), where a numeral phrase in subject position fails to license plural agreement[11] on the predicate.

[10]See Görgülü (2006), İşsever (2009) and Özsoy (2009) for properties of Turkish *wh-* words. For those of polar questions, see Zimmer (1998), Besler (1999), Aygen (2007), Kamali (2011), Yücel (2012), Gračanin-Yuksek (2014) and Özyıldız (2015).

[11]Differences exist, in terms of optionality and ordering with respect to tense aspect markers, between first and second person, both singular and plural 'agreement' on the one hand, and third

(16) a. bir denizci, on iki denizci(*-ler)
one sailor ten two sailor-P
one sailor, twelve sailors

b. On iki denizci gel-di(*-ler).
ten two sailor-P come-PST-3P
Twelve sailors came.

Sıfır, 'zero,' is acceptable as a D-Quantifier. As no other mention of it will be made, (17) also shows that it can be modified.

(17) Galatasaray (tam) sıfır gol at-tı.
Galatasaray exactly zero goal score-PST.3S
Galatasaray scored (exactly) *zero* goals.

The generalizations illustrated in (16a) and (16b) need to be qualified. First, there are grammatical combinations of numerals with plural nouns. This occurs when the entity denoted by the noun is a closed, 'well known' group (Göksel and Kerslake 2004: p. 148) or a proper name (Arslan-Kechriotis 2006: fn. 47). The examples in (18), for instance, can only be used to denote the group of characters from the tales.

(18) Yedi Cüce-ler-i, Üç Silahşör-ler-i, Kırk Harami-ler-i
seven dwarf-P-ACC three musketeers-P-ACC forty thieves-P-ACC
The Seven Dwarfs, the Three Musketeers, the Forty Thieves

I am unaware of any systematic exploration of this phenomenon. Given that it does not correspond to a common use of numerals, it can be safely be listed off as an exception here.

It should nevertheless be acknowledged that the rarity of 'closed, well known groups' might be leading to a mere appearence of exceptionality. Example (19) strongly suggests that this use of the plural is visible to the grammar: plural marking on the noun licenses plural agreement on the predicate, cf. (16b). This observation is, to the best of my knowledge, novel.[12]

(19) Yedi cüc-e-ler saç-ı-ndan tarağ-ı al-mış-lar.
seven dwarf-P hair-3S.POSS-ABL comb-ACC take-EVID-3P
The Seven Dwarfs removed the comb from her hair.

person plural 'agreement' on the other. A study targeting agreement in Turkish might find this inaccurate, but I must opt for ease of exposition here.

[12]Recovered online on June 30, 2015. Accessible at:
http://deniz.fr/saved_pages_for_data/yedi_cuceler.html

The second qualification is that there are cases where a *singular* numeral quantifier phrase appears to be triggering plural agreement on the predicate, shown in (20). However, the quantifier phrase here is not the subject of the predicate (Göksel and Kerslake 2004: p. 118). First observe that the available meaning is not one that would arise if the quantifier phrase were the subject:

(20) Bura-da üç kişi otur-uyor-lar.
here-LOC three person live-PRES-3P
Intended: Three people live here.
Available: They are three people to live here.

Furthermore, in (21a), a subject distinct from the quantifier phrase is expressed alongside it. And in (21b), the predicate bears first person plural agreement morphology, which is unexpected if agreement were triggered by 'three people,' a nominal with third person features.

(21) a. Burada onlar / çocuk-lar üç kişi otur-uyor-lar.
here they / child-P three person live-PRES-3P
They / the children are three to live here.

b. Burada (biz) üç kişi otur-uyor-uz.
here we three person live-PRES-1P
We're three people to live here.

This suggests that in structures like (20), the subject is a silent subject, distinct from the quantifier phrase. Although I cannot pursue this matter any further here, it is likely that the quantifier phrase is the predicate of a copular gerund structure that can be sketched out as follows:

(22) Burada biz$_i$ [PRO$_i$ üç kişi ~~olarak~~] otur-uyor-uz.
here we PRO three person be.GER live-PRES-1P
We're three people to live here.

My reviewer asks whether numeral phrases should be considered as quantifier phrases or as nominals with a numeral modifier. This is an interesting and delicate question, to which I cannot provide a definite answer. Both types of accounts will yield the correct overall meaning for the simple cases. They will differ in subtle predictions, for which further research is required, regarding scope, distributivity, and the possibility for bare numerals to serve as predicates. The literature seems to favor a modifier-like account. Kornfilt and von Heusinger (2009) describe formal similarities between numerals (and other quantifiers) and adjectives, when they form the subset expression of a partitive. Bošković and Şener (2014) propose to treat numerals as specifiers of NP, on a par with adjectives, on the basis of word order data.

The common core of a numeral's meaning is a specification of number. 'Two men' must minimally mean that the set of men contains (at least, perhaps) two entities. One important difference between the quantifier phrase account and the modifier account is whether the numeral itself is further responsible for existential import, or whether something else is, like a silent indefinite article distinct from the numeral.

In a language with overt determiners like French and English, the linear order of the determiner and the adjective ('Det Num Noun') argues in favor of the (possibility of the) second option. But a similar argument is difficult to construct for Turkish, as it lacks an overt definite determiner and its best candidate for an overt indefinite determiner is incompatible with numerals (compare '(*a) two men'). In Turkish, numerals must follow demonstratives. If the demonstrative is construed as a determiner, this would mean that numerals can be adjectives (Partee 2004). But languages like Greek, where both a demonstrative and a determiner may be overt in a single DP, raise various difficulties of this type of argument.

For further reading on the descriptive properties of Turkish numerals see Kornfilt (1996a, ex. 32 et sq., 1997, pp. 428–432), and Göksel and Kerslake (2004, pp. 181–188).

Cardinal Existentials: *bazı* and *kimi*

Bazı and *kimi* are the equivalents of the existential 'some.' They are compatible with both plural and singular nouns. The use of *bazı* with singular nouns is restricted to generic contexts (Arslan-Kechriotis 2006: fn. 51), most naturally obtained by using a predicate in the aorist, in (23b), or one bearing the generalized modality marker, in (23c) (Göksel and Kerslake 2004). Its use with plural nouns is not constrained in this way: *bazı* and a plural noun can occur in an episodic context, as in (23a).

(23) a. Episodic
Bazı öğrenci*(-ler) geç gel-di.
some student-P late come-PST.3S
Some students arrived late.

b. Generic: aorist
Bazı öğrenci(-ler) geç gel-ir.
some student-P late come-AOR.3S
Some students arrive late.
(Arslan-Kechriotis 2006)

c. Generic: generalizing modality marker
Bazı öğrenci(-ler) tembel-dir.
some student-P lazy-3S.GM
Some students are lazy.

Some native speakers report that the use of *bazı* with a singular noun results in an overall degradation. Such speakers nevertheless have a preference for (23b)

over (23a), when singular nouns are used. This is likely an idiosyncratic property of *bazı*, but a topic that requires further research.

Kimi can replace *bazı* in all of the sentences listed in (23). The difference is that *kimi* can occur in episodic contexts with singular nouns. Compare (23a) with (24):

(24) Kimi öğrenci(-ler) geç gel-di.
some student-P late come-PST.3S
Some students arrived late.

Existentials Formed with *bir*, 'one'

The functional category of the numeral *bir*, 'one,' is a matter of debate. In some environments it is intuitively understood as a numeral and in others as an indefinite article. The debate bears on whether its function as an indefinite article can be reduced to its function as a numeral, and on whether it can be regarded as a D head, in a language that otherwise lacks overt determiners. See Aygen (1999), Yükseker (2000), Öztürk (2005), Arslan-Kechriotis (2006) and Kornfilt (2007), a review of Öztürk.

For present purposes, it suffices to note that other numerals do not occur in the complex quantifiers where *bir* occurs. When another numeral is inserted in *bir*'s position, either the result is ungrammatical or unexpected meanings arise. This highlights *bir*'s non-numeral meaning in such environments.

Birkaç, literally 'a/one how many,' combines with singular nouns and its meaning is equivalent to 'a few' or 'several.' It denotes a vague number of entities, understood in context to be a few. Combining other numerals with *kaç*, 'how many,' is robustly ungrammatical.

(25) Bir-kaç / *iki kaç denizci sokak-ta şarkı söyl-üyor
one-how.many / two how.many sailor street-LOC song sing-PRES.3S
A few sailors are singing in the street.

Birtakım, literally 'one/a team,' is acceptable with singular and plural nouns. Its meaning does not encode any upper bound on the number of entities denoted. Its use seems to subtly encode a layer of meaning that can be characterized as 'speaker ignorance or intentional vagueness' about the nature of the entities denoted. This meaning contribution is comparable to what 'some' contributes in sentences like 'Some guy is here to see you' or to the French *une/des espèce(s) de* N, literally 'a/some species of N.'

(26) a. Bir-takım denizci(-ler) sokak-ta şarkı söyl-üyor
one-team sailor-P street-LOC song sing-PRES.3S
Some sailors are singing in the street.

b. bir-takım ilginç çocuk kitap-lar-ı
one-team interesting child book-P-POSS
some interesting children's books Göksel and Kerslake (2004)

If another numeral is used instead of *bir*, simple existential force is no longer available. The lexical item 'team' starts denoting its literal meaning and the head noun must occur in the singular, as it regularly does with numeral classifiers.

(27) İki takım denizci(*-ler)...
two team sailor
Two teams of sailors...

Further examples of this phenomenon are given in Sect. 3.4.2 on classifiers.

There are no inherently negative D-Quantifiers in Turkish. An inherently negative D-Quantifier can express semantic negation despite the absence of a negative predicate. 'No' in 'no sailor is singing' is one such example. In Turkish, meanings equivalent to 'no' are obtained by using the item *hiç* followed by an indefinite noun. *Hiç*, however, is not inherently negative. It requires the presence of a negative predicate to express a negative meaning.

(28) a. Hiç-bir denizci şarkı söyle*(-mi)-yor.
hiç-one sailor song sing-NEG-PRES.3S
No sailor is singing.

b. Hiç-bir denizci şarkıcı *(değil).
hiç-one sailor singer NEG
No sailor is a singer.

c. Bura-da hiç-bir denizci yok / *var.
here-LOC *hiç*-one sailor NEGEX / EX
There are no sailors here.

The head noun occurring with *hiç* is not introduced by the indefinite *bir* if this noun is *kimse*, 'someone/anyone,' in (29a), or if it is a mass noun, in (29bi). These nouns are incompatible with the indefinite *bir* in general, possibly because they encode indefiniteness lexically.

(29) a. Hiç kimse şarkı söyle*(-mi)-yor.
hiç anyone song sing-NEG-PRES.3S
Nobody is singing.

b. Hiç tuz kullan*(-ma)-dı-m.
hiç salt use-NEG-PST-1S
i) I have not used any salt.
ii) I have never used salt.

The item *hiç* has A-Quantifier uses as well, equivalent to '(n)ever'. This is illustrated in (29bii) and examined in further detail in Sect. 2.1.2.

This duality in meaning raises the questions of whether the item is *both* an A- and a D-Quantifier, and, if not, which it is. Readings like (29bii) where the item means 'never,' suggest that it can be used as a genuine A-Quantifier. Examples like (30), on the other hand, suggest that it can *also* be used as a genuine D-Quantifier. Indeed, its licenser is the negative comitative suffix *-sIz*, 'without' (Kelepir 2001: p. 161), negation on the predicate is not required.

(30) Bu et hiç tuz-suz piş-ti.
this meat *hiç* salt-without cook-PST.3S
Available: This meat was cooked without any salt. DQ
Unavailable: This meat was never cooked without salt. *AQ

Given that there is no 'predicate' in the phrase where *hiç* is licensed, it is not used as an A-Quantifier but as a D-Quantifier. Furthermore, the 'A-Quantifier reading' is unavailable. It becomes available if negation is used on the predicate, as in (31).

(31) Bu et hiç tuz-suz piş-me-di.
this meat *hiç* salt-without cook-NEG-PST.3S
i) This meat was not cooked without any salt. DQ
ii) This meat was never cooked without salt. AQ

Arguably, then, *hiç* occupies two distinct positions in (31), yielding two distinct readings.

Interrogatives

The equivalent of 'how many' is *kaç* and it combines with singular count nouns. The equivalent of 'which N' is *hangi N* and it freely combines with singular or plural nouns.

(32) a. Sınav-ı kaç öğrenci(*-ler) geç-ti?
exam-ACC how.many student-P pass--PST.3S
How many students passed the exam?

b. Sınav-ı hangi öğrenci(-ler) geç-ti?
exam-ACC which student-P pass--PST.3S
Which student(s) passed the exam?

Ne kadar, 'how much,' is most acceptable with mass nouns although uses with count nouns are attested. Literally *ne* is 'what' and *kadar* is used to denote an amount.

(33) a. Ne kadar şarap iç-ti-n?
what amount wine drink-PST-2S
How much wine did you drink?

b. Ne kadar öğrenci / *parmak var?
what amount student / finger EX
How many students / (Intended: fingers) are there?

Value Judgment

Basic value judgment quantifiers combine with both count and mass nouns. These are *az*, for 'few' or 'little,' *çok*, for 'many' or 'much,' *fazla*, for 'too many' or 'too much,' and *yeterince* for 'enough.' In some of their occurrences, the specification of which I leave for further research, *çok* and *az* respectively mean 'too much/many' and 'too little/few' (Brianna Kaufman, personal communication, July 22, 2014.).

(34) a. With count noun
Ders-e çok / az / fazla / yeterince öğrenci katıl-dı.
class-DAT many / few / too.many / enough student attend-PST.3S
Many / few / too many / enough students attended the class.

b. With mass noun
Çok / az / fazla / yeterince kan dök-ül-dü.
much / little / too.much / enough blood spill-PASS-PST.3S
Much / little / too much / enough blood has been spilled.

Bir combines with *çok* and yields a quantifier that combines with count nouns and with the meaning of 'many.' The phrase is comparable to the English, now obsolete or poetic, 'many a.' Although its use with singular nouns sounds more natural, in (35a), it is also attested with plural nouns, in (35b).

(35) a. Ders-e bir-çok öğrenci katıl-dı.
class-DAT one-many student attend-PST.3S
Many students attended the class.

b. Okul-da bir-çok karşıt grup-lar var-dı.
school-LOC one-many opposing group-P EX-PST.3S
There were many opposing groups at school.
from Fikret Kızılok, 'Karmakarışık'

The counterpart of *birçok*, *biraz* means '(just) a little' and only combines with mass nouns.

(36) Bir-az su iyi gel-ir.
one-little water good come-AOR.3S
A little water will do good.

Other value judgment quantifiers are also formed with *bir*. The examples in (37) illustrate *bir sürü*, meaning 'a lot,' literally 'a herd.' This quantifier is similar in form to the existential *bir takım*, 'several/some,' literally 'a team,' seen in (26a). The examples show it used with a count noun in (37a) and with a mass noun in (37b).

(37) a. Bir sürü öğrenci gel-di. 322
one herd student come-PST.3S
A lot of students came.

b. Bir sürü kan dök-ül-dü. 323
one herd blood spill-PASS-PST.3S
A lot of blood has been spilled.

All of these value judgment quantifiers, except *birçok*, have A-Quantifier uses as well. This again raises the question of whether the examples above involve D-Quantification, A-Quantifiaction, or both. One argument in favor of the view that both D- and A-Quantifier uses are genuinely available comes from the interpretive difference between (36) and (38).

(38) Su bir-az iyi gel-ir. 324
water one-little good come-AOR.3S
Water will do just a little good.

In (36), *biraz* quantifies over the mass noun 'water,' while in (38), it modifies the predicate. Moreover, these sentences are unambiguous, suggesting that whether a value judgment quantifier is interpreted as a D- or an A-Quantifier depends on its surface position and, in particular, that the position of the quantifier in (36) is not one that is derived by scrambling. (See the similar discussion about *hiç* before the section on interrogatives.) 325 326 327 328 329 330

2.1.2 A-Quantifiers 331

Value Judgment 332

For the sake of continuity, I begin by further illustrating A-Quantificational uses of the value judgment quantifiers listed above. 333 334

(39) a. Bir-az / az / çok / fazla / yeterince uyu-du-m. 335
one-little / little / much / too.much / enough sleep-PST-1S
I slept a little / (too) little / (too) much / too much / enough.

b. Bir sürü uyu-du-m. 336
one herd sleep-PST-1S
I slept a lot.

Multiplicatives

Multiplicatives, a word borrowed from Csirmaz and Szabolcsi (2012) to refer to expressions like 'once, twice, N times,' are formed by using one of the following synonymous equivalents of 'time(s)': *defa*, *kere* and *kez*. There is, as far as I can tell, no syntactic or semantic difference between these forms. Note that Turkish does not have idiosyncratic forms like 'once' or 'twice.'

(40) a. Can sınav-dan kaç defa kal-dı?
Can exam-ABL how.many time stay-PST.3S
How many times did Can fail the exam?

b. İki defa / kere / kez kal-dı.
two time / time / time stay-PST.3S
He failed it twice.

c. Az / çok / bir kaç / bir-çok defa kal-dı.
few / many / one how.many / one-many time stay-PST.3S
He failed it few / many / several / many times.

Never

'Never' is expressed by using the monomorphemic[13] *asla* or *hiç*. Both are negative polarity items, but the licensing conditions for *asla* are more restrictive than for *hiç*. Both are licensed under negation, as in (41a). But *hiç*, unlike *asla*, is also licensed by polar questions, as in (41b), and antecedents of conditionals,[14] as in (41c).

(41) a. Can haftasonları hiç / asla müze-ye git*(-me)-z.
Can weekends *hiç* / never museum-DAT go-NEG-AOR.3S
Can never goes to museums on weekends.

b. Can hiç / *asla Louvre-a gitti mi?
Can *hiç* / never Louvre-DAT went PQ
Has Can ever been to the Louvre?

c. Can hiç / *asla Louvre-a gid-er-se, kıskan-ır-ım.
Can *hiç* / never Louvre-DAT go-AOR-COND be.jealous-AOR-1S
If Can ever goes to the Louvre, I'll be jealous.

This difference argues for the fact that *hiç*, in these examples, is best translated as 'ever.' The meaning 'not ever' arises in its scopal interaction with negation. However, the examples in (42a) show that the same lexical item can also mean 'at

[13] In *asla*, the suffix *-an*, borrowed from Arabic, is detectable but not transparent.

[14] For recent work on the syntax and the semantics of *-sA*, see Iatridou (2013, 2015).

all' in the appropriate environment. This variation, along with its possible uses as a D-Quantifier (seen in (28) and (29a)), makes a unified description of *hiç* difficult to give.

(42) a. Ali-yi hiç sev-me-di-m.
Ali-ACC *hiç* like-NEG-PST-1S
i) I have never loved Ali.
ii) I didn't like Ali at all.

b. Bahçe-de hiç çocuk yok.
garden-LOC *hiç* child NEGEX
i) There aren't children in the garden at all.
ii) **Unavailable:** There never are children in the garden.
(Enç 1991: fn. 19)

A morphologically complex equivalent of 'never' is obtained by combining *hiç* and *bir zaman*, 'one time.' Unlike bare *hiç* but like other complex existential quantifiers formed with *hiç*, *hiç bir zaman* is only licensed by negation.

(43) Pinsk-e hiç bir zaman git*(-me)-di-m.
Pinsk-LOC *hiç* one time go-NEG-PST-1S
I have never gone to Pinsk.

Frequency Denoting Adverbs

The examples in (44) are a non-exhaustive list of frequency denoting adverbs.

(44) a. Derived by suffixation
nadir-en, baz-en, sık-ça, kimi-leyin
rare-*An* some-*An*, frequent-*cA*, some-*leyin*
rarely, sometimes, frequently, sometimes

b. Derived by doubling
sık (sık), zaman *(zaman)
frequent time
often, from time to time

c. Derived from D-Quantifier phrases
kimi zaman, çoğu zaman
some time, most time
sometimes, most times

d. Idiomatic
ara(-da) sıra(-da)
between-LOC row-LOC
sometimes

The suffixes illustrated in (44a) generally occur in adverbs. *-An* derives adverbs from nouns, *-cA* from adjectives and *-leyin* occurs in a closed set of adverbs denoting points in time (e.g., *akşam-leyin*, 'in the evening,' *sabah-leyin*, 'in the morning'). In (44a), *-leyin* is suffixed to the *wh-* word 'who' to yield an equivalent of 'sometimes.'

Doubling occurs obligatorily when the simple form cannot itself be used as an adverb (Kornfilt 1997: p. 462). This explains the grammaticality of both the simple and doubled forms of *sık*, 'often,' as an adverb, while only the doubled *zaman*, 'time,' is an adverb, meaning 'from time to time.' The following data points bring further support to this claim. In (45a), both simple and doubled forms can be used as adverbs, in (45b), adverbs are derived by doubling.

(45) a. yavaş (yavaş), çabuk (çabuk)
slow(ly) quick(ly)
slowly, quickly

b. kapı *(kapı), şarıl *(şarıl)
door ONOM
from door to door, by making the noise of abundantly flowing water

The first difference between morphologically simple and complex adverbs, including doubled ones, is that the former are generally licensed in the immediately preverbal position, whereas positions where the latter are licensed are less constrained. This is illustrated by the following contrast between (46a) on the one hand and (46b) and (46c) on the other. Jaklin Kornfilt (personal communication, September 28, 2014) points out that, in her dialect, preposing the doubled adverb to the clause is degraded while postposing it after the predicate is grammatical.

(46) a. (*sık) Ali (*sık) sinema-ya (sık) gid-er.
frequently Ali cinema-DAT go-AOR.3S
Ali frequently goes to the cinema.

b. (nadir-en) Ali (nadiren) sinema-ya (nadiren) gid-er.
rare-*An* Ali cinema-DAT go-AOR.3S
Ali rarely goes to the cinema.

c. (%Sık sık) Ali (sık sık) sinema-ya (sık sık) gid-er.
frequent Ali cinema-DAT go-AOR.3S
Ali frequently goes to the cinema.

A second difference is that simple adverbs can be modified, in (47a), while their doubled counterparts cannot, (47b). Some morphologically complex adverbs that do not feature doubling can also be modified, in (47c).

(47) a. Ali sinema-ya çok sık gid-er. 402
Ali cinema-DAT very frequently go-AOR.3S
Ali very frequently goes to the cinema.

b. *Ali sinema-ya çok sık sık gid-er. 403
Ali cinema-DAT very frequently go-AOR.3S
Intended: Ali very frequently goes to the cinema.

c. Ali sinema-ya çok *baz-en / nadir-en gid-er. 404
Ali cinema-DAT very some-*An* / rare-*An* go-AOR.3S
Ali very *sometimes / rarely goes to the cinema.

2.2 Generalized Universal Quantifiers 405

2.2.1 D-Quantifiers 406

Her, *tüm* and *bütün* are the basic set of universal D-Quantifiers. *Hepsi* is a fourth one, occurring only in possessive constructions with overt genitive or null restrictors.[15] *Her* strictly combines with singular nouns. With mass nouns, a count reading is coerced. 407 408 409 410

[15] *Hepsi* derives from the universal A-Quantifier *hep* and the 'possessive' morpheme *-(s)I*. But this morpheme surfaces as consonant initial instead of being vowel initial as is expected after a consonant final stem:

(i) Alternating surface forms of the possessive morpheme
içki-si, ip-i
drink-POSS string-POSS
his drink, his string

This suggests that *hepsi* derives from an intermediate form **hep-i-si* where the possessive morpheme has doubled. This intermediate form is unacceptable in the variety of Turkish described here, but an informal online search reveals that both *hep-i* and *hep-i-si* are attested in other dialects (I am grateful to my reviewer for pointing out this possibility as support for my claim). An example can be found in İbrahim Tatlıses's song 'Tek tek.' Nevertheless, in the variety of Turkish described here, the intermediate form is detectable in the colloquial diminutive form *hep-i-cik* – compare *cep-cik*, '(cute) pocket,' to see that the stem final *i* is not a phonological insertion. Instances of such doubling do exist elsewhere in Turkish:

(ii) kim, kim-i, kim-i-si, *kim-si
who who-POSS who-POSS-POSS who-POSS
who, some (people)

(48) Her çocuk / şarap ödül al-dı.
every child / wine prize take-PST.3S
Every child / wine won a prize.

Tüm, *bütün* and *hepsi* combine with plural count or singular mass nouns.

(49) a. Tüm / bütün çocuk-lar ödül al-dı.
all / all child-P prize take-PST.3S
All the children won a prize.

b. Tüm / bütün şarab-ı iç-ti-m.
all / all wine-ACC drink-PST-1S
I drank all of the wine.

c. Çocuk-lar-ın hep-si ödül al-dı.
child-P-GEN all-POSS prize take-PST.3S
All of the children won a prize.

d. Şarab-ın hep-si-ni iç-ti-m.
wine-GEN all-POSS-ACC drink-PST-1S
I drank all of the wine.

One difference between *tüm* and *bütün* is that the former can occur in genitive possessives while the latter cannot.

Her is strictly distributive but the other three universal D-Quantifiers are compatible with collective readings. The following examples use the predicate 'gathered,' that requires a semantically plural subject.

(50) a. *Her çocuk toplan-dı.
every child gather-PST.3S
Intended: *Every child gathered.

b. Tüm / bütün çocuk-lar toplan-dı.
all / whole child-P gather-PST.3S
All the children gathered.

c. Çocuk-lar-ın hep-si toplan-dı.
child-P-GEN all-POSS gather-PST.3S
All of the children gathered.

Her can be followed by any numeral. For all numerals other than *bir*, 'one,' the additive particle *dA*, 'also,' attaches to the right edge of the quantifier phrase.

(51) a. Her (bir) çocuk ödül al-dı. 427
every one child prize take-PST.3S
Every child won a prize.

b. Her on çocuk ?(da) ödül al-dı. 428
every ten child also prize take-PST.3S
All the ten children won a prize.

The combination of certain *wh-* words with *her* also carries universal quantificational force. Among such compounds, only the one with *hangi*, 'which,' is a D-Quantifier (and a free-choice item), others are discussed in (3.8). 429 430 431

(52) O soru-ya her-hangi *(bir) dilbilimci cevap ver-ebil-ir. 432
that question-DAT any-which one linguist answer give-ABIL-AOR.3S
Any (=every) linguist can answer that question.

2.2.2 A-Quantifiers 433

Turkish has two monomorphemic universal A-Quantifiers: *hep* and, the less frequent, *daima*. 434 435

(53) Can okul-a hep / daima otobüs-le gid-er. 436
Can school-DAT always / always bus-COMIT go-AOR.3S
Can always takes the bus to school.

Although *hep* does not appear to combine with noun phrases (at least in the same way as other D-Quantifiers), it can, in some instances, be interpreted as quantifying over nouns. In sentences (54a) and (54b), the readings in i) are preferred, which do not contain any frequency modification. Instead, it quantifies over an argument, a dative in (54a) and a subject in (54b). 437 438 439 440 441

(54) a. Vücud-un-a hep ben çiz-eceğ-im . 442
body-2S.POSS-DAT *hep* beauty.spot draw-FUT-1S
i) I will draw beauty spots on all of your body.
ii) I will always draw beauty spots on your body.

b. O pirinç tane-ler-i hep bit-ecek. 443
That rice grain-P-POSS *hep* finish-FUT.3S
i) Those grains of rice will all be eaten.
ii) Those grains of rice will always run out.

The distributive universal D-Quantifier *her* also combines with *zaman*, 'time' in its literal meaning, or with *defa*, 'time' in its multiplicative classifier[16] meaning to 444 445

[16]Recall that *defa* has two synonyms, *kere* and *kez*. Only *defa* is well formed with *her*.

mean ‘all the time’ or ‘on all occasions.’ The latter, *her defa*, is most felicitous in episodic contexts.

(55) a. Can okul-a her zaman / ?her defa otobüs-le gid-er.
Can school-DAT every time / every time bus-COMIT go-AOR.3S
Can takes the bus to school all the / every time.

b. Can okul-a her zaman / her defa otobüs-le git-ti.
Can school-DAT every time / every time bus-COMIT go-PST.3S
Can took the bus to school all the / every time.

If a numeral is used with *her defa*, it denotes the cardinality of the set of events quantified over.

(56) Can okul-a her üç defa otobüs-le git-ti.
Can school-DAT each three time bus-COMIT go-PST.3S
Can took the bus to school all three times.

Her can take bare nominalized complement clauses marked for the locative, as in (57a), or relative clause constructions headed by a temporal noun (57b).

(57) a. Can her duş al-dığ-ın-da şarkı söyle-r.
Can each shower take-NMZ-3S.POSS-LOC song sing-AOR.3S
Each time Can takes a shower, he sings.

b. Can her duş al-dığ-ı zaman şarkı söyle-r.
Can each shower take-NMZ-3S.POSS time song sing-AOR.3S
Each time Can takes a shower, he sings.

2.3 Proportional Quantification

2.3.1 D-Quantifiers

Some proportional D-Quantifiers combine directly with nouns. These are: *çoğu*, ‘most,’ the proportional readings of *çok*, ‘many,’ and *az*, ‘few,’ as well as some idiosyncratic expressions for fractions (‘half,’ ‘quarter’ and ‘whole,’ essentially). The modifier *nispeten*, ‘relatively,’ can be used to force ‘many’ and ‘few’ to be read proportionally.

(58) a. Çoğu / (nispeten) çok öğrenci Cumhuriyet ok-ur.
most / relatively many student Cumhuriyet read-AOR.3S
Most / (relatively) many students read Cumhuriyet.

b. (Nispeten) az öğrenci Cumhuriyet ok-ur. 460
relatively few student Cumhuriyet read-AOR.3S
(Relatively) few students read Cumhuriyet.

c. Çeyrek / yarım / tam ekmek, bir buçuk porsiyon 461
quarter / half / entire bread one and.a.half portion

I believe that the question of whether 'many' and 'few' are both cardinal and proportional, or only cardinal, extends to Turkish (Partee 2004). 462 463

Other proportional quantifiers occur in complex partitive constructions, where a restrictor occurs in the genitive or in the ablative (or is dropped). The presence of the possessive marker in these constructions makes them formally look like possessives, although they are semantically interpreted as partitives. 464 465 466 467

(59) a. Partitives with genitive restrictor 468
yirmi-nin sekiz-de yedi-si 469
twenty-GEN eight-LOC seven-POSS
seven eighths of twenty (Göksel and Kerslake 2004: ex. 64)

b. Denizci-ler-in on-da yedi-si / çoğ-u Player 470
sailor-P-GEN ten-LOC seven-POSS / many-POSS Player
içer.
smoke-AOR.3S
Seven tenths of / most sailors smoke Players.

c. Partitive with ablative restrictor 471
On denizci-den yedi-si / *çoğ-u Player iç-er. 472
ten sailor.S-ABL seven-POSS / many-POSS Player smoke-AOR.3S
Seven / *most out of ten sailors smoke Players.

It is frequent for the third person singular marker to appear on the quantifier phrase. The use of other person forms is grammatical, for instance in (60).

(60) Yüz-de on-um gitmek istiyor, yüz-de doksan-ım 473
hundred-LOC ten-1S.POSS to.go wants hundred-LOC ninety-1S.POSS
kalmak.
to.stay
Ten percent of me wants to go, ninety percent of me wants to stay.

Interrogative forms can be formed by substituting the *wh-* word *kaç*, 'how many,' for the numerator or denominator. Count noun restrictors are provided in the following examples. With mass, *ne kadar*, 'what amount,' is used instead of *kaç*. 474 475 476

(61) a. Denizci-ler-in on-da kaç-ı Player iç-er? 477
sailor-P-GEN ten-LOC how.many-POSS Player smoke-AOR.3S
How many sailors in ten smoke Players?

b. Denizci-ler-in kaç-ta yedi-si Player iç-er? 478
sailor-P-GEN how.many-LOC seven-POSS Player smoke-AOR.3S
Seven out of how many sailors smoke Players?

2.3.2 A-Quantifiers 479

Proportional A-Quantifiers can be derived from *çoğu*, 'most.' 480

(62) a. Can okul-a çoğu zaman otobüs-le gid-er. 481
Can school-DAT most time bus-COMIT go-AOR.3S
Most of the times Can takes the bus to school.

b. Can vergi form-lar-ı-nı çoğunluk-la kendisi doldur-ur. 482
Can tax form-P-POSS-ACC majority-COMIT himself fill.out-AOR.3S
i) Can mostly fills out his tax forms himself.
ii) Can fills out most of his tax forms himself.

Frequency denoting A-Quantifiers can receive proportional readings. In (63), going to the movies ten times a month is not an event occurring rarely, in the absolute sense. The proportion of movie-going, however, is low: 'rarely' is felicitous.[17]

(63) Sinema-ya nadiren gid-er-im. Ay-da on kez filan. 483
cinema-DAT rarely go-AOR-1S month-LOC ten times like
I rarely go to the movies. Like ten times a month.

Düzenle, 'regularly,' and *genelde*, 'generally' are other proportional A-Quantifiers. 484 485

(64) Okul-a düzen-le / genel-de otobüs-le gid-er-im ama 486
school-DAT order-COMIT / general-LOC bus-COMIT go-AOR-1S but
bazen araba-yla.
sometimes car-COMIT
I regularly / generally take the bus to school, but sometimes I take the car.

[17] As my reviewer notes, one should be careful and not read (63) ironically.

2.4 Morphosyntactically Complex Quantifiers

2.4.1 Complex D-Quantifiers

Quantity Bounding

The cardinality of the set quantified over can be bounded by comparative and superlative structures. The comparative is expressed with the standard of comparison in the ablative followed by an adjective. The superlative uses the item *en*, equivalent of the English suffix '-est,' followed by an adjective.

(65) a. By a comparative: Numeral-ABL Q Noun
beş-ten fazla / çok / az kadın
five-ABL more / more / less woman
more / less than five women

b. By a superlative: *en* + Q Numeral Noun
en fazla / çok / az beş kadın
SUP more / more / less five woman
at most / at least five women

By coordinating two comparative structures, both a lower and an upper bound can be expressed. In (66), the conjunction *fakat* can be used instead of *ama* without any change in meaning.[18]

(66) a. beş-ten fazla ama en fazla on üç kadın
five-ABL more but SUP more ten three woman
more than five but at most thirteen women

b. beş-ten fazla ama on üç-ten az kadın
five-ABL more but ten three-ABL less woman
more than five but less than thirteen women

Other means of coordination yield similar results. Among these are the comitative suffix *ile* or the conjunction *ila* following the lower bound and the equivalent of 'between' following the head noun. To the best of my knowledge, *ila* is used only as a quantity bounding expression.

(67) a. üç ile beş yaş ara-sı çocuk-lar
three COMIT five year between-POSS kid-P
kids from ages three to five

b. Otuz ila kırk bin fit ara-sı-nda-yız.
thirty CONJ forty thousand feet between-POSS-LOC-COP.1P
We are between thirty and forty thousand feet.

[18]Thanks to my reviewer for suggesting this, as well as example (66b).

‘Exactly’ and ‘Approximately’ Modifiers

The following examples illustrate various means of modifying the numeral in ‘five women’ to yield the meaning of ‘exactly’ or ‘approximately five.’

(68) a. Exactly
tam (ol-arak) / tam-ı tam-ı-na beş kadın
exactly be-GER / exact-POSS exact-POSS-DAT five woman
exactly five women

b. Only, just
sadece / yalnızca beş kadın
only / just five woman

c. Approximately
yaklaşık / neredeyse / hemen hemen beş kadın
close.to / almost / now now five woman
close to / almost / nearly five women

d. beş kadar kadın
five about woman
about five women

Aside from numerals, universal D-Quantifiers and negative existentials also allow modification:

(69) a. Neredeyse hiç-bir dilbilimci müzikçi değil-dir.
almost *hiç*-one linguist musician NEG-GM
Almost no linguist is a musician.

b. Neredeyse her dilbilimci / bütün dilbilimci-ler müzikçi-dir.
almost every linguist / all linguist-P musician-GM
Almost every linguist is a musician.

Among other expressions are the equivalents of ‘countless’ and ‘surprisingly many.’

(70) {sayı-sız / şaşırtıcı derece-de çok} mavi cüce
number-without / surprising degree-LOC many blue dwarf
countless / surprisingly many blue dwarfs

Value Judgment Cardinals

Value judgement cardinals can be modified in general.[19]

[19]My reviewer notes that, in some dialects, *çok çok*, the gap in (71a), has the meaning of ‘at worst,’ instead of the intended ‘very many.’

(71) a. çok az / *çok / fazla öğrenci
very few / many / many student
very few / many / many students

b. pek az / çok / fazla öğrenci
very few / many / many student
very few / many / many students

c. biraz %az / çok / fazla öğrenci
a.little few / many / many student
A little too few / too many students

The two value judgement cardinals that are formed with the indefinite, that is *birçok*, 'many,' and *biraz*, 'a little,' resist modification.

(72) a. *çok birçok öğrenci
very many student
Intended: very many students

b. %az biraz su
little a.little water
just a little water

While *yeterince*, 'enough,' resists modification, it can cooccur with negation. Both scope options, negation over 'enough' and 'enough' over negation, are available, in (73), though the former is preferred.

(73) Toplantı-ya yeterince kadın gel-me-di.
meeting-DAT enough woman come-NEG-PST.3S
It is not the case that enough women came to the meeting. ¬ > *enough*
Enough women were such that they didn't come to the meeting.
enough > ¬

Note that, in (71a), (71c) and (72b), the modifier is itself a value judgement quantifier. Among other acceptable modifiers are phrases like *aşırı / şaşırtıcı derecede*, 'to an extreme / a surprising degree,' or *oldukça*, a modifier derived from the verb *ol-*, 'to be,' that bears a meaning close to 'very.'

(iii) Konsere gidelim, çok çok bilet bulamadan döneriz.
to.the.concert let's.go many many ticket without.finding we'll.go.back
Let's go to the concert, at worst we'll come back without finding tickets.

The same reviewer notes that, in their dialect, the sequences *biraz az* and *az biraz* are unacceptable. I have indicated this in the examples with the sign '%'. It is possible that in such sequences, one of the quantifiers is being used as an A-Quantifier.

(74) a. aşırı / şaşırtıcı derece-de az / çok öğrenci. 538
extreme / surprising degree-LOC few / many student
an extremely / a surprisingly low / high number of students

b. ol-duk-ça az / çok öğrenci 539
be-NMZ-*cA* few / many student
very few / many students

Exception Modifiers 540

Two sets are required to interpret a quantifier phrase with an exception modifier, 541
the restrictor and an exception. (In 'every student except John and Bill,' the set of 542
students is the restrictor and the set containing John and Bill, the exception.) 543

Exception modifiers are most acceptable if the quantifier that is modified is a 544
universal, the negative existential *hiçbir* or an indefinite scoping under negation, or 545
the proportional *çoğu*, 'most.' The exception is introduced by *hariç* or by *dışında*, 546
of identical distribution. 547

(75) a. Can hariç her öğrenci / bütün öğrenciler ders-e gel-di. 548
Can except every student / all students class-DAT come-PST.3S
Every student / all the students except John came to the lecture.

b. Can hariç hiç-bir öğrenci ders-e gel-me-di. 549
Can except *hiç*-one student class-DAT come-NEG-PST.3S
No student except John came to the lecture.

c. Çok ucuz modeller hariç bir-çok / çoğu bulaşık makinesin-de 550
very cheap models except one-many / most dish machine-LOC
su tasarrufu özelliği var-dır.
water saving feature EX-GM
There is a water-saving feature in most / many dishwashers, except very cheap models.

Dışında is complex and can be broken down as follows:

(76) dış-ı-nda 551
outside-POSS-LOC
except (lit: outside it)

With a nominative argument, it introduces an exception. With a genitive argument, 552
in a genitive possessive construction, it can either introduce an exception or retain 553
its literal, compositional meaning.[20] When it is used as an exception modifier, its 554

[20]Thanks to my reviewer for correcting the second generalization.

argument is obligatory, in (77a). As a complex postposition, its argument can be dropped (77b) if it is recoverable in context.

(77) a. *(Ev) dışında birşey sat-ma-dı-m.
house except something sell-NEG-PST-1S
I didn't sell anything *except* the house.

b. (Ev-in) dışında birşey sat-ma-dı-m.
house-GEN except something sell-NEG-PST-1S
i) I didn't sell anything *outside* the house. Argument optional
ii) I didn't sell anything *except* the house. Argument obligatory

If the exception and the restrictor contain an identical noun, it is more natural to leave one unexpressed. In this case, a possessive construction is used anaphorically, in the exception in (78a) and in the restrictor in (78b).

(78) a. iki-si hariç her öğrenci
two-POSS except every student
every student except two

b. iki öğrenci hariç hiç-bir-i
two student except *hiç*-one-POSS
no student except two

Boolean Compounds

Conjunction

Conjunction is expressed by *ve*, 'and,' the comitative suffix on the first conjunct or by *ama*, 'but.' Note that the comitative serves as a conjunction marker here, but retains the meaning 'with' in other environments.

(79) a. And
Her öğretmen ve bazı öğrenciler ödül al-dı.
every teacher and some students prize take-PST.3S
Every teacher and some students won a prize.

b. The comitative
Her öğretmen-le bazı öğrenciler ödül al-dı.
every teacher-COMIT some students prize take-PST.3S
Every teacher and some students won a prize.

c. But
En az iki ama on-dan az ögrenci burs al-acak.
SUP few two but ten-ABL few student scholarship get-FUT.3S
At least two but less than ten students will get scholarships.

Two bivalent conjunction operators are available: *hem… hem… (de)*, 'both… and…' and *ne… ne… (de)*, 'neither… nor.' See Şener and İşsever (2003) for a discussion of the latter type of construction.

(80) a. Kantin-i hem her öğrenci hem (de) bazı öğretmenler
cafeteria-ACC both every student and also some teachers
boykot et-ti.
boycott LV-PST.3S
Both every student and some teachers boycotted the cafeteria.

b. Kantin-i ne her öğrenci ne (de) her öğretmen boykot
cafeteria-ACC neither every student nor also every teacher boycott
et-ti.
LV-PST.3S
Neither every student nor every teacher boycotted the cafeteria.

Disjunction

Disjunction is expressed by using *veya*,[21] *ya da* or the bivalent operators *ya… ya… (da)* and *ha… ha…*. The second one is restricted to colloquial and emphatic contexts.

(81) a. O sınav-ı çok az ve-ya / ya da çok fazla öğrenci
that exam-ACC very few and-or / or also very many students
geç-ecek.
pass-FUT.3S
Very few or very many students will pass that exam.

b. O sınav-ı ya çok az ya (da) çok fazla öğrenci
that exam-ACC either very few or also very many students
geç-ecek.
pass-FUT.3S
Either very few or very many students will pass that exam.

c. Ha iki araba çarpış-sın ha üç, bu bir kaza.
ha two car collide-OPT.3S *ha* three this one accident
Let two cars collide, or three, it's still an accident.

[21] Note that *veya* is a compound of *ve*, 'and,' and *ya*, a disjunctive morpheme, see (81b).

Negation

Negated quantifiers make use of predicate negation. For a discussion about scope relations between quantifiers and negation, see Sect. 3.11.

(82) Her bekçi uyukla-ma-z.
every guard snooze-NEG-AOR.3S
Not all guards snooze. (Lit: Every guard doesn't snooze.) $(\neg > \forall, *\forall > \neg)$

Partitives

Genitive Possessives

One way of forming partitives is the genitive possessive structure.

(83) a. Universal and intersective
Hırsız-lar-ın hep-si / iki-si de / yalnızca iki-si /
thief-P-GEN all-POSS / two-POSS also / just two-POSS /
her bir-i yaka-lan-dı.
each one-POSS catch-PASS-PST.3S
All / both / just two / each one of the thieves was / were caught.

b. Negative intersective
Hırsız-lar-ın hiç-bir-i / iki-si de yaka-lan-ma-dı.
thief-P-GEN *hiç*-one-GEN / two-POSS also catch-PASS-NEG-PST.3S
None / neither of the thieves were caught.

c. Value judgment
Hırsız-lar-ın az-ı yaka-lan-dı.
thief-P-GEN few-POSS catch-PASS-PST.3S
Few of the thieves were caught.

d. Interrogative
Hırsız-lar-ın kaç-ı yaka-lan-dı?
thief-P-GEN how.many-POSS catch-PASS-PST.3S
How many of the thieves were caught?

e. Proportional
Amerikalı-lar-ın üç-te bir-i / çoğ-u yabancı
Americans-P-GEN three-LOC one-POSS / many-POSS foreign
dil bil-ir.
language know-AOR.3S
A third / most of Americans know a foreign language.

While count nouns in partitives occur in the plural, mass nouns occur in the singular.

(84) Pilav-ın çoğ-u-nu ye-di-m.
rice-GEN many-POSS-ACC eat-PST-1S
I ate most of the rice.

All of the quantifiers occurring in genitive possessive phrases can be used as partitive pronominals. (85a) illustrates an existential quantifier with third person singular and first person plural morphology. (85b) shows that plural morphology can sometimes be expressed, and sometimes 'twice,' in these constructions. (85c) illustrates a universal and a proportional.

(85) a. bazı-sı, bazı-mız
some-3S.POSS some-1P.POSS
some (people), some of us

b. bazı-lar-ı, bazı-lar-ımız
some-P-3S.POSS some-P.1P.POSS
some (people), some of us

c. hep-iniz / çoğ-unuz
all-2P.POSS / most-2P.POSS
all / most of you$_{PL}$

My reviewer suggests the following generalization: *-lAr*, the regular plural marker, is optional when it follows 'some' and precedes possessive morphology.

Overt genitive pronouns are licensed in these partitives, but their expression is constrained by general restrictions on pronominal expression (Enç 1986; Erguvanlı Taylan 1984; Kornfilt 1984; Öztürk 2002: a.o.). In (86), for instance, an overt pronoun is licensed by contrastive focus, indicated by caps.

(86) *(BİZ-İM) hep-imiz davetli-yiz, *(SİZ-İN) hep-iniz değil.
1P-GEN all-1P.POSS invited-COP.1P 2P-GEN all-2P.POSS NEG
All of US are invited, not all of YOU.

Some variation is observed in predicate agreement. It is obligatory in (86) with the universal, but (87), with an existential, is more acceptable without agreement.

(87) Bazı-lar-ımız davetli / *davetli-yiz.
some-P-1P.POSS invited-COP.3S invited-COP.1P
Some of us are invited.

Although some partitive pronouns triggers agreement with the predicate, they fail to agree with a possessum, in (86).

(88) (biz-im) hep-imiz-in araba-sı / *araba-mız
1S-GEN all-1P.POSS-GEN car-3S.POSS / car-1P.POSS
all of our car (the car we all share)

See İnce (2008) and Aydın (2009) for a discussion of these agreement patterns.

Ablative Restrictors

The restrictor of a partitive can also be expressed with the ablative. In the absence of overt quantifiers occurring with the ablative phrase, as in (89a), (89b) and (89c), the meaning of an indefinite 'part' or 'subset' is conveyed. It can be translated as 'some' of the restrictor. Examples (89d) and (89e) include ablative restrictors with overt quantifiers. As with genitive possessive structures, both mass and count nouns can occur as restrictors, but they respectively occur in the singular and in the plural.

(89) a. Mass noun restrictor, no quantifier
Pilav-dan ye-di-m.
rice-ABL eat-PST-1S
I ate some (of the) rice.

b. Count noun restrictor, no quantifier
%Öğrenci-ler-den gel-di.
student-P-ABL come-PST.3S
Some (of the) students came

c. Count noun restrictor, no quantifier
Bu sigara-lar-dan iç-ti-n mi?
this cigarette-P-ABL smoke-PST-2S PQ
Did you smoke some of these cigarettes?

d. Mass noun restrictor
Pilav-dan iki kaşık / bir parça ye-di-m.
rice-ABL two spoon / one piece eat-PST-1S
I ate two spoons / a bit of the rice.

e. Count noun restrictor
Öğrenci-ler-den iki temsilci gel-di.
student-P-ABL two representative come-PST.3S
Two representatives from the students came.

Kornfilt (1996a) argues that in these partitives, the ablative noun, and the null or overt quantifier form a constituent. This is illustrated in (90a) and (90b), where some technical details are omitted. The null quantifier, labeled *pro*, invariably means 'an unspecified amount of,' while an overt quantifier keeps its regular compositional meaning.

AQ1

(90) a. I [rice-ABL two.spoons] ate =(89d)
I ate two spoons of the rice.

b. I [rice-ABL *pro*] ate =(89a)
I ate 'an unspecified amount of' the rice.

Before turning to a slight challenge for this account, I need to report that my reviewer and some consultants do not share the judgment in (89b). I have provided a second example, in (89c), to show that similar structures are productively available in my dialect.

As the reviewer points out, the sentences are predicted to be grammatical under Kornfilt's (1996a) analysis. This is interesting. The restriction, in my reviewer's dialect, seems to target *count* noun restrictors with the *null* partitive quantifier. An hypothesis (to be tested) is whether the variation resides in the meaning of the null quantifier. For the speakers of my dialect, it quantifies over both count and mass nouns; For those of my reviewer's, it is restricted to quantify over mass nouns only. Given that some overt quantifiers are compatible with both count and mass, and others with only mass, the claim has initial plausibility.

The constituency hypothesis sketched out above seems to run into trouble with the value judgment quantifier in (91). (Other value judgment quantifiers can be substituted for *az* here.)

(91) Mass noun restrictor, value judgment quantifier
[Pilav-dan az] ye-di-m.
rice-ABL little eat-PST-1S
I ate little (of the) rice. Hypothesized constituency

A consequence of the hypothesis is that the complex partitive phrase occurs as the argument of the predicate. This is supported, in particular, by instances where the head quantifier bears overt case morphology assigned by the predicate, in (92).

(92) Pilav-dan iki kaşığ-ı ye-dir-di-m.
rice-ABL two spoon-ACC eat-CAUS-PST-1S
I fed (someone) the two spoons of rice.

However, *az* cannot bear case in this position.

(93) Pilav-dan az(*-ı) ye-dir-di-m.
rice-ABL little-ACC eat-CAUS-PST-1S
Intended: I fed (someone) some of the rice.

This observation, along with the fact *az* serves, in other instances, as A-Quantifier (see the section on simplex value judgment quantifiers) both suggest that *az*, here, is a modifier of the predicate, not the head of a partitive structure. An alternative hypothesis, suggested by my reviewer, is that *az* is indeed a modifier, but a modifier of the silent head of the partitive, not one of the predicate.

A preliminary test suggests that the second hypothesis is on the right track. In (94a), a telic predicate, 'to win,' is used, which should be inappropriate when modified with an A-Quantifier like '(a) little.' The prediction is borne out. Imagine now, for (94b), a cooking contest where an unspecified amount of rice is the prize. The sentence is felicitous.

(94) a. #Az kazan-dı-m. 676
little win-PST-1S
a) #I won a little. (Infelicitous unless there are 'degrees' of winning.)
b) I won few times. (Not intended.)

b. Pilav-dan az kazan-dı-m. 677
rice-ABL little win-PST-1S
I won a little bit of the rice.

This suggests that *az* (and others) can be a modifier of a silent partitive quantifier. 678
Though further research might be required here to spell out predictions and semantic 679
details. 680

As a concluding remark on this section on partitives, I refer the reader to Kornfilt 681
and von Heusinger (2009) for differences between genitive and ablative partitives. 682

2.4.2 Complex A-Quantifiers 683

Cardinal Quantifiers 684

(95) a. Quantity bounding 685
Sean Dublin-e tam iki defa / beş defa-dan fazla git-ti. 686
Sean Dublin-DAT exactly two time / five time-ABL more go-PST.3S
Sean has been to Dublin exactly twice / more than five times.

b. Existential, proportional and universal 687
Sue iş-e bazı haftasonları / çoğu haftasonu / neredeyse 688
Sue work-DAT some weekends / most weekend / almost
her Cuma otobüs-le gid-er.
every Friday bus-COMIT go-AOR.3S
Sue takes the bus to work on some / most weekends / almost every Friday.

c. Negative existential 689
Ann okul-a neredeyse hiç otobüs-le git-me-z. 690
Ann school-DAT almost *hiç* bus-COMIT go-NEG-AOR.3S
Ann almost never takes the bus to school.

d. Modified existential 691
Ann okul-a sadece ara-da sıra-da otobüs-le 692
Ann school-DAT only between-LOC row-LOC bus-COMIT
gid-er.
go-AOR.3S
Ann only occasionally takes the bus to school.

e. + Count comparative 693
Ann okul-a sen-den iki kat daha sık otobüs-le 694
Ann school-DAT -ABL two fold COMP often bus-COMIT
gid-er.
go-AOR.3S
Ann takes the bus to school twice as often as you do.

f. − Count comparative 695
Ann sen-den iki kat daha fazla uy-ur. 696
Ann 2S-ABL two fold COMP more sleep-AOR.3S
Ann sleeps twice as much as you do.

g. Bounded universal 697
Her iki defa bisiklet-im-i çal-dı-lar. 698
all two time bike-1S.POSS-ACC steal-PST-3P
They stole my bike both times.

h. Bounding phrase 699
Ed (tam) otuz yıl boyunca hafta-da beş gün sene-de elli 700
Ed exactly thirty year during week-LOC five day year-LOC fifty
hafta çalış-tı.
week work-PST.3S
Ed worked for five days a week, 50 weeks a year, for 30 years.

i. Can hafta-nın beş gün-ü iki defa yirmi şınav çeker. 701
Can week-GEN five day-POSS two times twenty push-up pull
Can does twenty push-ups twice a day, five days a week.

Boolean Compounds 702

(96) a. Seçim-ler-de Ann genel-de CHP-ye oy ver-ir ama 703
election-P-LOC Ann general-LOC CHP-DAT vote give-AOR.3S but
her zaman değil.
every time NEG
In elections Ann has generally voted for the CHP but not always.

b. Can o sınav-a en az iki ama beş-ten az defa
Can that exam-DAT SUP less two but five-ABL few times
gir-di.
enter-PST.3S
Can took that exam at least two but not more than five times.

c. Ann haftasonları ve Noel dışında her tatil-de geç
Ann weekends and Christmas except every holidays-LOC late
kalk-ar.
raise-AOR.3S
Ann gets up late on weekends and on every holiday except Christmas.

2.5 *Addenda*

2.5.1 The Suffix *-lAr-cA*

The plural morpheme followed by the adjective and adverb forming suffix *-cA* (Göksel and Kerslake 2004: pp. 55–58) creates D- and A-Quantifiers.

(97) a. D-Quantifier
On-lar-ca / düzine-ler-ce / ton-lar-ca yumurta aldım
ten-P-*cA* / dozen-P-*cA* / ton-P-*cA* egg bought
I bought *tens / dozens / tons of eggs.

b. Multiplicative
Ali sınav-dan defa-lar-ca kal-dı.
Ali exam-ABL time-P-*cA* fail-PST.3S
Ali failed the exam many times.

c. Time/measure phrases
Hafta-lar-ca / kilometre-ler-ce yürü-dü-m.
week-P-*cA* / kilometer-P-*cA* walk-PST-1S
I walked for weeks / kilometers.

2.5.2 Someone, Anyone, Everyone and the Like

Pronominal quantifiers are listed in (98):

(98) a. 'Some' paradigm
bir-i, bir şey, bir yer
one-POSS, one thing, one place
someone, something, somewhere

b. ‘Any’ paradigm
(hiç) kimse, hiç bir şey, hiç bir yer
hiç anyone, *hiç* one thing, *hiç* one place
anyone, anything, anywhere

c. ‘Every’ paradigm
herkes, her şey, her yer
everyone, every thing, every place
everyone, everything, everywhere

Members of the ‘some’ paradigm are indefinites. A third person possessive morpheme is detectable in *bir-i*, ‘someone,’ like in other quantifiers listed above. Although the morpheme carries a partitive interpretation in genitive possessives with plural count noun restrictors, as in (99a), it has non-partitive uses with singular count restrictors, as in (99b). Although singular mass noun restrictors do occur in the singular in partitives, the meaning here with a count noun is that of an indefinite.

(99) a. Hırsız-lar-ın bir-i yakala-n-dı.
thief-P-GEN one-POSS catch-PASS-PST.3S
One of the thieves was caught.

b. Hırsız-ın bir-i / tek-i yakala-n-dı.
thief.S-GEN one-POSS / single-POSS catch-PASS-PST.3S
Some thief was caught.

Example (99b) also includes the item *tek*, ‘single,’ compatible with the same indefinite meaning. This suggests that the non-partitive use of the possessive morpheme is not restricted to its occurrence with *bir*. When these items are used without an overt restrictor, only *bir* is compatible with an indefinite meaning.

(100) Bir-i / #tek-i yakala-n-dı.
one-POSS / single-POSS catch-PASS-PST.3S
i) Compatible with *bir*: Someone was caught.
ii) Only available with *tek*: One member of a pair of entities was caught.

The possessive morpheme can be doubled without any semantic consequence.[22]

(101) Bir-i-si gel-di.
one-POSS-POSS come-PST.3S
Someone came.

[22]My reviewer notes, at various points throughout this paper, that I mistakenly assume possessive suffix doubling where there is none. This is an accurate observation, at places, but examples like (101) show that the phenomenon is real, unless one can find a way of analyzing the intermediate ‘i’ as a phonological insertion in *birisi*. See Footnote 15.

As a final observation about indefinites, their use in the plural is licensed in reference to both singular and plural entities. In (101), the plural form of 'something' is given. Sentence (102b) suggests that this is a semi-productive mechanism. Sentence (102c) gives the plural form of the animate indefinite.

(102) a. Bir şey(-ler) ye-di-m.
one thing-P eat-PST-1S
I ate something.

b. Bir ses(-ler) / #gitar(-lar) duy-du-m.
a noise-P / guitar-P hear-PST-1S
I heard a noise / some noises (Intended: some guitars).

c. Biri-leri gel-di.
someone-3P.POSS come-PST.3S
Someone / some people came.

The members of the 'any' paradigm are all NPIs. The item *hiç* is expressed without any obvious meaning contribution. Its expression, however, restricts the licensing conditions of these items to negation (and the morpheme *-sIz*). Note that *kimse*, akin to the French NPI *personne*, has the literal meaning of 'person.'

(103) a. Negation licenses both *kimse* and *hiç kimse*
(Hiç) kimse gel*(-me)-di.
hiç anybody come-NEG-PST.3S
Nobody came.

b. Polar questions license *kimse* but not *hiç kimse*
(*Hiç) kimse gel-di mi?
hiç anybody come-PST.3S PQ
Intended: Did anybody come?

A similar observation holds for *hiç bir şey*.

(104) a. Bugün (hiç) bir şey ye-me-di-m.
today *hiç* one thing eat-NEG-PST-1S
I didn't eat anything today.

b. Bugün (*hiç) bir şey ye-di-n mi?
today *hiç* one thing eat-PST-2S PQ
Did you eat anything today?

2.5.3 Phonological Reduction Affecting *bir*

The final consonant of *bir*, 'one/a,' is often elided, but there are environments where it cannot be. Where elision is available, the use of a non-elided form is generally a feature of careful speech, elision is colloquial. Here, I provide an overview of environments licensing elision.[23] For the purposes of exposition, the (un)availability of elision is indicated by parentheses and asterisks.

Elision is available when simple *bir* is followed by a nominal, but not in complex numerals like *yirmi bir*, 'twenty one,' or fractions like *onda bir*, 'one tenth.'

(105) a. Bahçe-de bi(r) / yirmi bi*(r) ayı gör-dü-m.
garden-LOC one / twenty one bear see-PST-1S
I saw a bear / twenty one bears in the garden.

b. On-da bi*(r) oran-ı-nda işsizlik var.
ten-LOC one proportion-POSS-LOC unemployment EX
Lit: There is unemployment at the proportion of one tenth.

My reviewer suggests that elision is more frequent or more acceptable before a consonant than before a vowel, in colloquial speech. This could be a feature of some grammars to avoid diphtongs and consonant clusters. The pattern is summarized in (106).

(106) bir / ?bi ayı, ?bir / bi kitap
a bear a book

But we seem to agree that, although stylistic and phonological factors do seem to regulate the distribution of *bir*/*bi*, the ungrammatical forms in (105) are due to something different.

The ungrammatical forms would be straightforwardly accounted for, if it is assumed that numeral *bir* cannot elide (neither in careful nor in colloquial speech). This is an appealing hypothesis, that relies on the claim that elision reveals the functionalization of the numeral into an indefinite article. The examples in (107), however, suggest that this is a simplistic view. Elided *bir* can productively mean numeral 'one.'

(107) a. Bi kişi-lik yer ayirt-tı-m.
one person-for place book-PST-1S
I've made reservations for one/*a person.

b. Bu ev iki oda bi salon.
this house two room one living.room
This house has two rooms and one/#a living room.

[23] Elided *bir*, sometimes spelled as *bi'*, with an apostrophe, has recently started appearing in written form in advertisements in Turkey.

For a stronger claim, one would need to show that elided *bir* does not come to mean 'a single' in some environments, instead of 'one.' (The examples above would remain acceptable.) This seems like a tricky, but noteworthy task.

Other than in complex numerals, a second place where elision is not available is in *biraz*, literally 'one few' for 'a little' (Göksel and Kerslake 2004: p. 179). This might be the only complex quantifier formed with 'one' where elision is unavailable. Additionally, it is one of the only quantifiers that is only compatible with mass nouns. Alongside it, in (108), some grammatical instances of elision in similar structures are provided. Compare *biraz*, *bir ağız* and *bir avuç* to see that elision is not blocked by phonology here.

(108) Bi*(r)az, bi(r)çok, bi(r) ağız, bi(r) avuç
a little, many, a mouthful, a handful

Finally, I would like to mention a restriction on non-elided *bir*. In *bi(r) şey*, 'something,' elision is generally available like in the examples in (108). The word *şey*, 'thing,' is also a target of phonological reduction. Elision and reduction, however are not disconnected operations. Rather, as the pattern in (109) suggests, reduction of *şey* is licensed by the elision *bir*. Or, in other words, reducing *şey* makes elision obligatory.

(109) Bir şey, bi şey, bi şi, *bir şi.
Something

The next examples suggest that the word *şey* cannot be reduced in other environments where it occurs:

(110) a. Sana iki şey / *şi diy-eceğ-im.
2S.DAT two thing say-FUT-1S
I'm going to tell you two things.

b. Sana diye-ceğ-im şey / *şi şu-ydu...
2S.DAT say-NMZ-1S thing this-COP.PST.3S
What I was going to tell you was this...

The question is whether there is a relation between the two reduction processes in (109). One way of denying that there is one could simply state that *bişi* is the independent result of a relexicalization process. It is, in a sense, a single morpheme. This is reasonable, given that *şey* does not seem to reduce in environments other than following *bir*.

A way of asserting that there *is* a relation, suggested by my reviewer, can be stated as follows: when reduction is a possibility, once a speaker reduces one morpheme, the following one is reduced as well. The following contrast is in favor of this option. Observe the predicate following *bişi*. In (111a), it is not reduced and the result is strange. In (111b), reduction affects the predicate as well and the result is fully acceptable.

(111) a. ??Bi şi diyeceğim.
one thing say.FUT.1S

b. Bi şi diycem.
one thing say.FUT.1S
I'm going to say something.

However, stating the relationship in terms of 'spreading' might be too strong, as the following type of example, where the indefinite and the predicate are both fully reduced, but not the 'intervening' item *şey*.

(112) Bi şey diycem.
one thing say.FUT.1S
I'm going to say something.

As a concluding remark, the contrast in (111) convincingly shows that register has an effect in licensing phonological reduction. Example (112) suggests, however, that the effect is not sequential, but global. We have not dismissed the relexicalization hypothesis here.

3 Selected Topics

3.1 Comparative Quantifiers

In positive and negative comparatives, the standard of comparison (the 'than' phrase) is expressed in the ablative.

(113) a. Simple ablative comparative
Tören-e kız-dan (daha) fazla / az oğlan katıl-dı.
ceremony-DAT girl-ABL COMP more / less boy attend-PST.3S
More / fewer boys than girls attended the ceremony.

b. Modified ablative comparative
Tören-e kız-dan yaklaşık iki kat daha az oğlan
ceremony-DAT girl-ABL nearly two fold COMP less boy
katıl-dı.
attend-PST.3S
Twice as few boys as girls attended the ceremony.

c. Interrogative ablative comparative
Tören-e kız-dan kaç fazla oğlan katıl-dı?
ceremony-DAT girl-ABL how.many more boy attend-PST.3S
How many more boys than girls attended the ceremony?

In equatives, the standard of comparison is marked by the comitative. The unit of comparison (a 'number of' or a 'proportion of' phrase) must explicitly be specified and it appears in the locative.

(114) a. (Modified) equative
Öğretmen-le (tam) aynı sayı-da öğrenci-yle
teacher-COMIT exactly same number-LOC student-COMIT
konuş-tu-k.
speak-PST-1P
We spoke to the (exact) same number of students as teachers.

b. Possessive equative
Öğretmen-le aynı sayı-da öğrenci-nin bisiklet-i
teacher-COMIT same number-LOC student-GEN bicycle-3S.POSS
çal-ın-dı.
steal-PASS-PST.3S
As many students' as teachers' bicycles were stolen.

The standard of comparison can be expressed as the complement of the postposition *göre*, 'relative to,' for positive and negative comparatives, and *kadar*, 'as X as Y,' for equatives. The expression of a unit of comparison is obligatory with the former, optional with the latter.

(115) Positive comparative with *göre*, 'relative to.'

a. Kadın *(sayı-sın-a) göre daha fazla erkek
woman number-POSS-DAT relative.to COMP more man
katıl-dı.
attend-PST.3S
More men attended relative to women.

b. Bu sınıf-ta öğrenci (sayı-sı) kadar masa var.
this class-LOC student number-POSS as... as... table EX
In this classroom there are as many tables as students.

One last common way of forming comparatives is by using a biclausal structure: the 'correlative comparison' (Kornfilt 1997: p. 181).

(116) Sen-de kaç para var-sa, bende de o kadar / 2S-LOC how.much money EX-COND.3S 1S-LOC also that amount / iki kat-ı var.
two times-POSS EX
Whatever amount of money you have, I have the same amount / twice that.

3.2 *Type (2) Quantifiers*

The examples in (117) illustrate the uses of *farklı*, 'different,' *benzer*, 'similar,' *ayrı*, 'separate' and *aynı*, 'the same.' The first three occur with plural definite or indefinite nouns, *aynı*, however, can occur with either singular or plural definite nouns. This pattern is also observed in English: 'John and Mary like (*the) different thing*(s) / *(the) same thing(s).'

(117) a. Farklı insan-lar (çok) farklı / benzer şey*(-ler) sever.
different human-P very different / similar thing-P like
Different people like (very) different / similar things.

b. Çocuk-lar (tamamen) ayrı okul-lar-a gidi-yor-lar.
child-P entirely separate school-P-DAT go-PRES.PROG-3P
The children go to (entirely) different schools.

c. Farklı insan-lar aynı şey(-ler)*(-i) sev-er.
different human-P same thing-P-ACC like-AOR.3S
Different people like *(the) same thing(s).

Below are further examples.

(118) a. Her öğrenci farklı *(bir) / aynı (*bir) soru-yu
every student different one / same one question-ACC
cevapla-dı.
answer-PST.3S
Every student answered a different/the same question.

b. Hangi öğrenci-ler hangi soru-lar-ı cevapla-dı?
which student-P which question-P-ACC answer-PST.3S
Which students answered which questions?

c. John ve Bill komşu köy-ler-de yaş-ıyor ve rakip takım-lar
John and Bill neighbor village-P-LOC live-PRES and rival team-P
tutu-yor-lar.
support-PRES-3P
John and Bill live in neighboring villages and support rival teams.

d. John Mary-yle dans et-ti ama başka kimse
John Mary-COMIT dance LV-PST.3S but other anyone
kimse-yle dans et-me-di.
anyone-COMIT dance LV-NEG-PST.3S
John danced with Mary but no one else danced with anyone else.

e. Can asla aynı film-i tek bir defa-dan fazla 844
Can never same movie-ACC single one time-ABL more
izle-me-z.
watch-NEG-AOR.3S
Can never watches the same movie more than once.

f. Can sık sık aynı film-i tek bir defa-dan fazla 845
Can often often same movie-ACC single one time-ABL more
izle-r.
watch-AOR.3S
Can often watches the same movie more than once.

g. Resim-ler farklı oda-lar-a veya aynı oda-nın karşılıklı 846
picture-P different room-P-DAT or same room-GEN opposite
duvar-lar-ın-a as-ıl-dı.
wall-P-POSS-DAT hang-PASS-PST.3S
The pictures were hung in separate rooms or on opposite walls of the same room.

h. Farklı jüri üye-leri aynı iddia-lar-dan farklı 847
different jury member-3P.POSS same claims-P-ABL different
sonuç-lar-a var-dı.
conclusion-P-DAT arrive-PST.3S
Different jurors arrived at different conclusions from the same claims.

3.3 Distributive Numerals 848

Distributive numerals are formed by using the suffix *-(ş)Ar*, glossed as here as DIST. 849

(119) Distributive D-Quantifiers 850

a. Bu kitap*(-lar)-ın fiyat-ı beş-er dolar. 851
this book-P-GEN price-POSS five-DIST dollar
These books cost five dollars each.
Unavailable: The combined price of these books is five dollars.
(Kornfilt 1997)

b. İki-şer (tane) mızrak taşı-yor-lar. 852
two-DIST unit_{CL} spear carry-PRES-3P
They carry two spears each.

c. İstanbul, İzmir ve Antalya-ya bir-er gemi yolla-dı-k. 853
Istanbul Izmir and Antalya-DAT one-DIST ship send-PST-1P
We sent a ship each to Istanbul, Izmir and Antalya.

Doubled 'numeral + *şAr*.'phrases serve as adverbial modifiers.

(120) Distributive A-Quantifier
Çocuklar iki-şer *(iki-şer) sıra-ya gir-di-ler.
children two-DIST row-DAT enter-PST-3P
The children lined up in twos.

The phrase *kişi başı* in (121a), literally 'head of a person,' also forces distributive meanings, unlike *toplam(-da)*, 'in total' or *hep beraber*, 'all together,' in (121b) that force collective readings. The light noun *kişi* in the distributive phrase can productively be switched with other nouns. This is illustrated in (121c).

(121) a. Asistan-lar kişi baş-ı altmış sınav oku-du-lar.
assistant-P person head-POSS sixty exam read-PST.3S-3P
The assistants graded sixty exams each.

b. Asistan-lar toplam / hep beraber altmış sınav oku-du-lar.
assistant-P total / all together sixty exam read-PST.3S-3P
The assistants graded sixty exams in total / together.

c. Ders baş-ı(n-a) iki asistan görevlendir-il-di.
class head-POSS-DAT two assistant put.in.charge-PASS-PST.3S
Two assistants were put in charge of each class.

3.4 Mass Quantifiers and Noun Classifiers

3.4.1 Dedicated Mass and Count Quantifiers

The quantifiers listed in (122a) are most acceptable with count nouns.

(122) a. Intersective
bir, on, birkaç, birçok, hiç-bir, kaç hangi öğrenci / *kum
one ten several many *hiç*-one how.many which student / sand
one/a, ten, several, some, many, no, how many, which student(s)/*sand(s)

b. Intersective, singular or plural
bazı, kimi öğrenci(-ler) / *kum(-lar)
some some student-P / sand-P
some students/*sands

c. Co-intersective
her öğrenci / *kum
each student / sand
each student/*sand

d. Proportional
Çoğu öğrenci / *kum
most student / sand
Most student(s)/*sand(s)

All of these quantifiers exclusively combine with singular nouns except those in (122b), which combine with either singulars or plurals. There is an interpretive difference between singular and plural nouns with these quantifiers. The former carry a 'type of' interpretation and are licensed in generic contexts (Arslan-Kechriotis 2006).[24]

In general, when the quantifiers in (122a) combine with mass nouns, 'kind' or 'container' readings arise.

(123) a. Bazı pirinç geç piş-er.
some rice late cook-AOR.3S
Some kinds of rice cook slowly. Arslan-Kechriotis (2006)

b. Bazı bira-lar-da / iki bira-da meyve aroması va-rdı.
some beer-P-LOC / two beer-LOC fruit flavor EX-PST.3S
There was a fruit flavor in some of the beers / two beers.

The quantifiers listed in (124) are acceptable with both mass and count nouns. Aside from idiomatic uses of *çok* with plural nouns (Arslan-Kechriotis 2006: fn. 48; like *çok teşekkür-ler*, lit. 'many thank-s'), the quantifiers in (124a) combine with singular nouns while those in (124b) and (124c) combine with count nouns in the plural and mass nouns in the singular.

(124) a. Intersective, value judgment
az, çok öğrenci / kum
little/few much/many student / sand
little / much sand, few / many students

b. Co-intersective
bütün, tüm öğrenci-ler / kum
all all student-P / sand
all of the students / sand

c. Proportional
öğrenci-ler-in / kum-un hep-si, dört-te üç-ü,
student-P-GEN / sand-GEN all-POSS four-LOC three-POSS
çoğ-u
many-POSS
all, three fourths, most of the students / sand

[24] Arslan Kechriotis lists the quantifier *bazı* as being compatible with both mass and count nouns. I do not disagree with this judgment. For present purposes, it suffices to note that *bazı*, like other quantifiers listed in (122a), carry *count* meanings when they combine with mass nouns.

If mass nouns are used in the plural with the quantifiers in (124b) and (124c), ‘kind’ readings arise.[25]

(125) a. Bütün pirinc-i pişir-di-m.
all rice-ACC cook-PST-1S
I cooked all of the rice.

b. Bütün pirinç-ler-i pişir-di-m.
all rice--P-ACC cook-PST-1S
I cooked all the kinds of rice.

As far as I can tell, *biraz*, ‘a little,’ and *ne kadar*, ‘how much,’ combine only with mass nouns.

(126) a. *Bir-az öğrenci gel-di.
one-few student come-PST.3S
*Little students came. (Intended: Few students came.)

b. Bir-az pilav ye-n-di.
one-few rice eat-PASS-PST.3S
A little rice was eaten.

c. *Ne kadar öğrenci gel-di?
what amount student come-PST.3S
*How much students came? (Intended: How many students came?)

d. Ne kadar pilav ye-n-di?
what amount rice eat-PASS-PST.3S
How much rice was eaten?

3.4.2 Classifiers

Some Classifier Expressions

Here, the term ‘classifier’ is used descriptively in reference to the types of expressions discussed below. In the literature (specifically about the expression *tane*) authors use the following range of terms: ‘enumerator’ (Göksel and Kerslake

[25] Count nouns can also be constrained into mass readings, to some extent.

(iv) Cesed-in hep-si var-dı mı?
corpse-GEN all-POSS arrive-PST.3S PQ
Did all of the corpse arrive? (For instance, at the morgue.)

2004), 'classifier' (Arslan-Kechriotis 2006; Kornfilt and von Heusinger 2009), 'so-called classifier' (Öztürk 2005) and 'classifier like element' (Bošković and Şener 2014).

Classifier expressions are used with both count and mass nouns. They, along with the nouns they classify, occur in the singular. The expressions illustrated in (127a) have recognizable denotations, those in (127b) are container expressions, those in (127c) are measure phrases and those in (127d) denote groups.

(127) a. Dedicated numeral classifiers
iki diş sarımsak, somun ekmek, parça sakız, salkım üzüm
two tooth garlic loaf bread piece gum bunch grapes
two cloves of garlic, loaves of bread, pieces of gum, bunches of grapes

b. Container expressions
iki çay kaşığ-ı şeker, tutam maydanoz, kadeh şarap
two tea spoon-POSS sugar pinch parsley glass wine
two teaspoons of sugar, pinches of parsley, glasses of wine

c. Measure phrases
iki kilo elma, litre süt, metre halat
two kilogram apple liter milk, meter rope
two kilos of apples, liters of milk, meters of rope

d. Cardinal collective phrases
iki düzine yumurta, dört çift çorap
two dozen egg four pair sock
two dozen eggs, four pairs of socks

These expressions are typically used in ablative partitive constructions.

(128) Sarımsak-tan iki diş, ekmek-ten üç somun lütfen.
garlic-ABL two clove bread-ABL three loaf please
Two (of the) apples and three loaves of (the) bread please.

Kural (997b) has a paper on syntactic and semantic differences between measure phrases used with 'motion' and those used with 'change of state' predicates. His claim is that measure phrases are arguments of motion predicates, but modifiers of change of state predicates. This is supported by the observations that the former may be accusative marked, in (129a), unlike the latter, in (129b), and that the former may be the subject of a passive, in (129c), unlike the latter, in (129d).

(129) a. Ahmet 400 metre(-yi) koş-tu.
Ahmet 400 meter-ACC run-PST.3S
Ahmet ran for/the 400 meters.

b. Gemi 400 metre(*-yi) bat-tı. 924
ship 400 meter-ACC sink-PST.3S
The ship sunk 400 meters.

c. 400 metre koş-ul-du. 925
400 meter run-PASS-PST.3S
400 meters were run.

d. *400 metre bat-ıl-dı. 926
400 meter sink-PASS-PST.3S
*400 meters were sunk.

Kural explicitly excludes measure phrases introduced by the postposition *boyunca*, 'for' or 'during,' and temporal measure phrases. I include the relevant examples for the sake of completeness.

(130) a. Yarışçı-lar 400 metre boyunca koş-tu. 927
runner-P 400 meter for run-PST.3S
The runners ran for 400 meters.

b. Yarışçı-lar 20 dakika(*-yı) koş-tu. 928
runner-P 20 minute-ACC run-PST.3S
The runners ran 20 minutes.

Measure phrases introduced by a postposition seem to be indistinct from post- 929
position phrase modifiers. The contrast between (129a), with optional accusative 930
marking, and (130a), with accusative marking ungrammatical, indicates that not all 931
bare measure phrases that occur with motion predicates are arguments. This sug- 932
gests an argument/modifier distinction different from Kural's proposal. Accusative 933
(or, overtly case) marked measure phrases are arguments, others are modifiers. This 934
claim, of course, should be looked at more carefully. 935

Tane and *adet* 936

Unlike the numeral classifiers in (127a), the expressions *adet* and *tane* do not have 937
recognizable denotations and can be used with almost any count noun. 938

(131) Neutral numeral classifiers 939
iki adet / tane elma, deri ceket, bisiklet 940
two unit / unit apple leather jacket bicycle
two apples, leather jackets, bicycles

The literal meaning of *tane*, 'grain' or 'seed,' can be accessed in the following 941
genitive possessive constructions, while *adet* simply means 'unit.' 942

(132) a. iki kum / pirinç / nar / kar tane-si
two sand / rice / pomegaranate / snow *tane*-POSS
two grains of sand / rice, seeds of pomegranate, snowflakes

b. *beş elma tane-si
five apple *tane*-POSS
Intended: five (units of) apples Kornfilt (1997)

Tane has a wider distribution than *adet*. Example (133a) suggests that *adet* is felicitous with relatively small entities, (133b) shows that *tane* can be used with mass nouns and give rise to count readings while *adet* cannot and (133c) shows that *adet* is not felicitous with animates.

(133) a. İki *adet / tane bina inşa et-tir-di-m.
two unit / unit building construction LV-CAUS-PST-1S
I had two buildings constructed.

b. İki *adet / tane çay lütfen.
two unit / unit tea please.
Two teas please.

c. İki *adet / tane kedi gör-dü-m.
two unit / unit cat see-PST-1S
I saw two cats.

Some speakers avoid using *tane* with animates. (My reviewer points out that some speakers avoid using it with humans, while being able to use it with other animates, and that this difference might be the consequence of a 'prescriptivist divide.') The use of *tane* with humans and other animates is, nevertheless, frequently attested. And for speakers who accept it, the contrast in (133c) is robust.

None of these classifier phrases are compatible in general with D-Quantifiers other than numerals and *birkaç*, 'several' (Arslan-Kechriotis 2006: p. 85). But a grammatical example is given in (134c) with a distributive universal.

(134) a. İki / birkaç / ?birçok tutam maydanoz koy.
two / several / many pinch parsley put.IMP.2S
Put two / several / many pinches of parsley.

b. *{Bazı tutam maydanoz-lar-ı / her tutam maydanoz-u} koy.
some pinch parsley-P-ACC / every pinch parsley-ACC put.IMP.2S
Intended: Put some pinches / every pinch of parsley.

c. Koy-duğ-un her tutam maydanoz-a iki parça peynir
put-NMZ-2S.POSS every pinch parsley-DAT two piece cheese
at.
throw.IMP.2S
Throw in two pieces of cheese for every pinch of parsley.

Functionalized Classifier Phrases

Group denoting classifiers, illustrated in (135), can carry a vague quantificational meaning when used with the indefinite/numeral *bir* but retain their literal meaning with other numerals.[26]

(135) a. bir-takım basketbolcu-lar, bir / iki takım basketbolcu
one-team basketball.player-P one / two team basketball.player.S
some basketball players, one team / two teams of basketball players

b. bir sürü inek, yığın oyuncak
one herd cow heap toy
a herd / a lot of cows, a heap (literal and value judgment) of toys

c. iki sürü inek, yığın oyuncak
two herd cow heap toy
two herds of cows, two heaps of toys

These quantifier phrases have additional properties that set them apart from their similar classifier phrase counterparts. Three are mentioned here. First, *birtakım*,[27] 'a team of/some,' combines with plural nouns in its quantificational meaning but with singular nouns in its literal meaning. This is in (135a). Second, *bir sürü*, 'a herd of/a lot of' has a phonologically reduced form *bissürü* that is unambiguously a value judgment quantifier, not a classifier phrase.

(136) Bissürü inek gör-dü-m.
a.herd cow see-PST-1S
Available: I saw a lot of cows.
Unavailable: I saw a herd of cows.

[26]The phenomenon exists in French and in English. Moreover, Vincent Homer, p.c., points out that the plural does not affect the availability of the quantificational meaning. Compare also 'a load, loads, two loads of books.' The last one only receives a literal reading.

(v) a. Yığın-lar-ca kitap
heap-P-*cA* book
Heaps of books

b. Un / des / #deux tas de livre-s
one / DET.P / two heap of book-P
A heap / heaps / #two heaps of books

[27]Orthographic conventions require that *birtakım* be spelled together when intended as an existential quantifier and separately, as *bir takım*, when intended as a group denoting classifier phrase.

And last, for *bir yığın*, 'a heap,' to be felicitous in its quantificational meaning, the set of objects quantified over are not required to be disorganized, as in a heap (semantic bleaching).

(137) Ali-nin, hepsi alfabetik sıraya göre dizili, bir yığın
Ali-GEN all alphabetical order according.to arranged a heap
kitab-ı var.
book-3S.POSS EX
Ali has a heap of books, all organized in alphabetical order.

3.5 *Existential Constructions*

Existence and non-existence are expressed by the dedicated copular predicates *var*, 'there is/exists,' and *yok*, 'there isn't/doesn't exist.'

(138) a. Bahçe-de ağaç var(-mış).
garden-LOC tree EX-EVID
There (apparently) are trees in the garden.

b. Bahçe-de ağaç yok-tu.
garden-LOC tree NEGEX-PST
There weren't any trees in the garden.

As with other copular predicates, they are used only in the simple present, simple past, and with the simple occurrence of the evidential *-mIş* (Göksel and Kerslake 2004: pp. 109–110). In other tenses, mood and modality combinations, the verb *ol-* is used instead of *var* and its negated form *ol-ma-* instead of *yok*.

(139) İleri-de bura-da ağaç ol(-ma)-yacak.
ahead-LOC here-LOC tree be-NEG-FUT.3S
There will be/won't be any trees here in the future.

Bare *yok* can be used as a negative answer to polar questions, existential and non-existential alike. Its positive counterpart can only be used as a (tag) positive answer to existential polar questions.[28] This is illustrated in (140). The possible answers 'yes' and 'no' are included for comparison.

[28]They do form nouns: *yokluk*, 'poverty, nothingness,' and verbs: *yok ol-*, 'to disappear,' *yok et-*, 'to destroy.' Compare *varlık*, 'creature' or 'abundance,' *var ol-*, 'to come into existence.'

(140) a. Süt var mı? (‘Is there any milk?’)
Evet. Hayır. Var. Yok.
yes no EX NEGEX
Yes. No. There is. There isn’t.

b. Gelecek misin? (‘Are you going to come?’)
Evet. Hayır. *Var. Yok.
yes no EX NEGEX
Yes. No. (Intended:) I am. I’m not.

Two Types of Existential Constructions, and Possession

Turkish has two types of existential constructions (Erguvanlı Taylan 1984; Kelepir 2001) Sentence (141a) is an example of a ‘presentative/locative’ existential, where the coda[29] occurs in the locative. Sentence (141b) is an example of a ‘genitive possessive’ existential, where the coda is in the genitive and the pivot carries an agreeing possessive suffix. Sentence (141c) shows that the existential predicate agrees with the pivot, but that this is not visible with the third person, in (141a) and (141b).

(141) a. Bahçe-de bir köpek var.
garden-LOC one dog EX
There is a dog in the garden.

b. Sen-in iki araba-n var.
2S-GEN two car-2S.POSS EX
You have two cars. Kelepir (2001)

c. Bahçe-de ben var-ım.
garden-LOC 1S EX-COP.1S
I’m in the garden. (Lit: *There’s me in the garden.)

Both locative and genitive possessive existentials are compatible with a possessive relation between the coda and the pivot. In (142) below, a locative construction, a possessive reading arises, as it does with the genitive construction in (141b).

(142) Sen-de iki araba var.
2S-LOC two car EX
You have two cars. Kelepir (2001)

[29] In discussing existentials like ‘There is a dog in the garden’ the ‘pivot’ refers to the DP ‘a dog,’ and the ‘coda’ to the PP ‘in the garden.’ In Turkish, codas will be locatives or genitives.

However, there is a slight semantic difference between (141b) and (142). Sentence (141b) is most acceptable in a setting where the possessor *owns* the two cars, while there is no such requirement for (142). As a test, in (143), both sentences followed by an assertion that intends to cancel the ownership relation. Only sentence (143b), with the locative existential, is felicitous.

(143) a. Ben-im iki araba-m var. #Ama bana ait değil-ler.
1S-GEN two car1S.POSS EX but 1S.DAT belong NEG-P
Intended: I have two cars, but they don't belong to me.

b. Ben-de iki araba var. (ok) Ama bana ait değ-i-ler.
1S-LOC two car EX but 1S.DAT belong NEG-P
I have two cars, but they don't belong to me.

Moreover the compatibility of locative constructions with possessive readings is restricted to alienable non-relational nouns (such as 'a car'). Observe that with alienable relational ('a friend') inalienable relational ('an aunt') or inalienable non-relational ('a finger') nouns, the locative construction is ungrammatical, in (144a), while the genitive is grammatical, in (144b).

(144) a. *Ben-de iki arkadaş / teyze / parmak var.
1S-LOC two friend / aunt / finger EX
Intended: I have two friends / aunts / fingers.

b. Ben-im iki arkadaş-ım / teyze-m / parmağ-ım var.
1S-LOC two friend-1S.POSS / aunt-1S.POSS / finger-1S.POSS EX
I have two friends / aunts / fingers. Adapted from Kelepir (2001)

The reading for (144a), with these nouns, is coerced into an alienable non-relational one, as if, for instance, I had a figurine or something on a playing card.

On the other hand, genitive possessives are incompatible with non-possessive, simply existential readings.

(145) a. Kahve makinesin-de kahve var.
coffee machine-LOC coffee EX
There's coffee in the coffee machine.

b. *Kahve makinesi-nin kahve-si var.
coffee machine-GEN coffee-POSS EX
Intended: There's coffee in the coffee machine.

Lastly, possessive readings are obtained by coercion in genitive possessives, where conceivable, as in (146a). The intended reading of (146a) is the only one available with the locative existential in (146b).

(146) a. Bu lokanta-nın bira-sı var mı? 1034
this restaurant-GEN beer-POSS EX PQ
Intended: Is there beer in this restaurant?
Available: Does this restaurant have a beer to its name?

b. Bu lokanta-da bira var mı? 1035
this restaurant-LOC beer EX PQ
Is there beer in this restaurant?

Compatibility with Quantifiers 1036

Both types of existential constructions are compatible with various types of quantifiers, listed non-exhaustively in (147):

(147) a. Sınıf-ta çok fazla öğrenci var. 1037
class-LOC very too.many student EX
There are too many students in the class.

b. Ben-im çok fazla öğrenci-m var. 1038
1S-GEN very too.many student-1S.POSS EX
I have too many students.

c. Çorba-da çok tuz var / yeterince tuz yok. 1039
soup-LOC much salt EX / enough salt NEGEX
There is too much/not enough salt in the soup.

d. Ben-im çok su-yum var / yeterince su-yum yok. 1040
1S-GEN much water-1S.POSS EX / enough water-1S.POSS NEGEX
I have too much/don't have enough water.

e. Sınıf-ta hiç / iki-den fazla kadın var mı? 1041
class-LOC *hiç* / two-ABL many woman EX PQ
Are there any/more than two women in the class?

f. Sen-in hiç / iki-den fazla arkadaş-ın var mı? 1042
2S-GEN *hiç* / two-ABL many friend-2S.POSS EX PQ
Do you have any/more than two friends ?

g. Komite-de hiç-bir öğrenci yok. 1043
committee-LOC *hiç*-one student NEGEX
There aren't any students on the committee.

h. Ben-im hiç-bir öğrenci-m yok. 1044
1S-GEN *hiç*-one student-1S.POSS NEGEX
I don't have any students.

i. Ben-im etek kadar elbise-m / etek-ten fazla
1S-GEN skirt as.many.as dress-1S.POSS / skirt-ABL many
elbise-m yok.
dress-1S.POSS NEGEX
I don't have as many dresses as skirts/more dresses than skirts.

The Definiteness Effect

Proper names, in (148a), and pronouns, in (148b) are acceptable pivots, even though they are definite.

(148) a. Parti-de Ali var mı?
party-LOC Ali EX PQ.COP.3S
Is Ali at the party? (Lit: *Is there Ali at the party?)

b. Parti-de sen var mı-sın?
party-LOC 2S EX PQ-COP.2S
Are you at the party? (Lit: *Is there you at the party?)

Turning to quantifiers *per se*, different illustrations of the definiteness effect exist in the literature. The data seems to be subject to some variation and apparent contradictions are found. The goal of this section is to summarize and to probe the validity of three claims about the definiteness effect in Turkish. I also attempt to organize the data and identify global hypotheses about what triggers (and what obviates) the effect. This, I hope, prepares the ground for further research.

Enç (1991) provides data from locative existentials and observes that the intersective quantifiers *bazı* and *hiçbir* are ungrammatical pivots, unlike *birkaç*. (I explain the difference between Enç's grammaticality marks and the ones I provide below.)

(149) a. (*)Bahçe-de bazı çocuk-lar var.
garden-LOC some child-P EX
*There are some of the children in the garden. * by Enç

b. %Bahçe-de hiç-bir çocuk yok.
garden-LOC *hiç*-one child NEGEX
Intended: There are no children in the garden. * by Enç

c. Bahçe-de bir-kaç çocuk var.
garden-LOC one-how.many child EX
There are some children in the garden. Enç (1991)

Her generalization is that quantifiers that form *specific* noun/quantifier phrases are ungrammatical pivots.[30] An independent syntactic test, in Turkish, for whether a noun phrase must be specific or not is whether it must overtly be accusative marked in a direct object position. The correlation is convincing:

(150) a. Obligatory ACC marking: effect trigger cf. (149a) 1060
Ali Zeyneb-e bazı kitap-lar*(-ı) yolla-dı. 1061
Ali Zeynep-DAT some book-P-ACC send-PST.3S
Ali mailed some of the books to Zeynep.

b. Optional ACC marking: not an effect trigger cf. (149c) 1062
Ali Zeyneb-e birkaç kitab(-ı) yolla-dı. 1063
Ali Zeynep-DAT some book-ACC send-PST.3S
Ali mailed some (of the) books to Zeynep. Enç (1991)

This proposal makes clear cut predictions. Quantifiers like *her* and *bütün*, both universals, and *çoğu*, 'most,' should also trigger the effect, given that the quantifier phrases that they form must be accusative marked in direct object positions (not illustrated). The prediction is borne out. All three trigger the definiteness effect:

(151) a. *Bahçe-de her/çoğu çocuk var. 1064
garden-LOC each/most child EX
*There is each kid/are most of the kids in the garden.

b. *Bahçe-de bütün çocuk-lar var. 1065
garden-LOC all child-P EX
*There are all of the kids in the garden.

Enç's generalization is able to cover some variation in the data as well. Recall that the grammaticality marks provided for the sentences in (149) were different from Enç's judgments. Under a particular kind of intonation, (149a) is acceptable for me. If the predicate is stressed, the sentence is unacceptable. If the pivot is stressed, the sentence is acceptable. Moreover, the acceptability of (149b) is subject to dialectal variation. The sentence is acceptable at least for me and for my reviewer (see also (147g) and (147h) for two other grammatical examples of this type), but it is not acceptable for Enç and one other native speaker. Both propose a grammatical variant of (149b) with *hiç*, instead of *hiçbir*.

(152) Bahçe-de hiç çocuk yok. 1066
garden-LOC *hiç* child NEGEX
There are no children in the garden. (Enç 1991: fn. 19)

[30]The relevant notion for Enç is 'specificity' rather than 'definiteness.' For the details of the discussion, I refer the reader to the article.

Of course, one would need to control for whether *hiç*, in this sentence, is being used as a D-Quantifier, and that it is not an A-Quantifier, which would have the approximate meaning of 'There aren't children in the garden *at all* (=*hiç*).'

Now, according to the generalization, speakers of my dialect should find quantifier phrases formed with *bazı* and *hiçbir* acceptable *without* accusative marking in a direct object position. That is, we should be able to access non-specific readings for these quantifiers. This seems to hold:

(153) a. Kütüphane-de bazı kitap-lar oku-du-m.
library-LOC some book-P read-PST-1S
I read some books at the library.

b. Hayat-ım-da hiç-bir kitap oku-ma-dı-m.
life-1S.POSS-LOC *hiç*-one book read-NEG-PST-1S
I haven't read any books in my life.

The variation here seems to be, in part, in the lexicon. This is already what Enç has to assume for the difference she observes between *bazı* and *birkaç*, two semantically similar quantifiers that behave differently with respect to the definiteness effect in her dialect. We have, however, seen that her proposal quite reliably predicts what quantifiers will be subject to the effect and that it is able to capture across-speaker variation.

In an adult acquisition study by White et al. (2011), data from locative existentials suggest that the definiteness effect only occurs with the positive existential predicate *var*, and not with the negative *yok*. This is illustrated by the contrasts in (154), with (154a) repeated from (151a). The effect is lifted for the other quantifiers as well.

(154) a. *Bahçe-de her çocuk var.
garden-LOC every child EX
Intended: *There's every child in the garden.

b. Tören-de her ülke yok.
ceremony-LOC every country NEGEX
Not every country is at the ceremony. $\forall > \neg$
Lit: *There isn't every country at the ceremony. White et al. (2011)

The authors do not provide an explanation for this phenomenon, but they observe that similar facts hold for Russian as well. One intuitive lead would be to explore whether it is the interaction between the quantifier and negation that is neutralizing the effect, either by making available a non-specific reading for the quantifier phrase, or by making available logically equivalent paraphrases with quantifiers that are not subject to the effect. For instance, the universal scoping under negation, in (154b), can be paraphrased with an existential, and we've seen that some existentials are not subject to the effect. If this is on the right track, which paraphrase(s) are relevant

should of course be constrained. A challenge for this hypothesis, however, will be presented in the discussion of example (156) below.

To the best of my knowledge, Kelepir (2001) is the only author to compare locative and genitive possessive existentials in examining the definiteness effect. She shows that the quantifiers *her* and *bütün*, i.e., the universals, trigger the effect in genitive possessive existentials (*çoğu*, 'most,' patterns similarly):

(155) a. *Ben-im bütün İngilizce kitap-lar-ı-m var.
1S-GEN all English book-P-POSS-1S.POSS EX
Intended: I have all of the English books.

b. *Ben-im MIT tarafından yayınlanmış her kitab-ım var.
1S-GEN MIT by published every book-1S.POSS EX
Intended: I have every book that has been published by MIT.
Adapted from Kelepir (2001)

Interestingly, White et al.'s (2011) observation does not extend to genitive possessives. Ungrammaticality persists with the negative predicate.

(156) *Ben-im bütün İngilizce kitap-lar-ı-m yok.
1S-GEN all English book-P-POSS-1S.POSS NEGEX
Intended: I don't have all of the English books.

This challenges any explanation of the observation in terms of an interaction between the quantifier and the negative predicate. Although both are held constant across (154b) and (156), the former sentence is acceptable while the latter is not.

Kelepir's second claim, in apparent contradiction with some of the data presented above, is that locative existentials *do not* display the definiteness effect. Observe (157a) and (157b), compared to the sentences in (151).

(157) a. Ben-de bütün İngilizce kitap-lar-ı var.
1S-GEN all English book-P-POSS EX
I have all of the English books.

b. Ben-de MIT Press tarafından yayınlanmış her kitap var.
1S-LOC MIT Press by published every book EX
I have every book that has been published by MIT Press.
Kelepir (2001)

I agree with Kelepir's judgments for these sentences. And this raises the question of what could be causing the acceptability of these two examples, in contrast with the unacceptability of the ones in (151).

There are two differences between the two sets of sentences, which might be a confounding factor. First, although they are formally locative existentials, the grammatical examples in (157a) and (157b) express possession, the ungrammatical

ones in (151) do not. Second, the grammatical examples feature an overt restriction on the domain of quantification (all the *English* books, every book *published by MIT*), the ungrammatical ones do not. I leave the second difference aside.

The following example shows that, all else being equal, locative existentials that express possession do not appear to trigger the effect, while non-possessive locative existentials do.

(158) Ben-de çoğu kitap var.
1S-GEN most book EX
I have most of the books.

This suggests that locative existentials in their non-possessive use, and that genitive possessive existentials (in their possessive use) pattern together in triggering the definiteness effect. Locative existentials that express possession seem to be exempt from it.

3.6 Scrambled Quantifiers

If 'floating' quantifiers have properties distinct from 'scrambled' quantifiers, the availability of scrambling in Turkish might be a confound for the identification of floating quantifiers. Pending further research on whether this is the case, I describe quantifiers that can occur in (apparently) derived surface positions, away from the noun that they quantify, and use 'scrambling' and 'floating' interchangeably.

First, I report a claim against the existence of floating quantifiers in the language, found in a comparative study between Quechua and Turkish (Muysken 1989). The author proposes a specific mechanism that licenses quantifier floating in Quechua: quantifier floating is available if and only if the quantifier is overtly marked for the same case as the head noun, as in (159a). The same operation is ungrammatical in Turkish, as shown in (159b). (Quantifiers in their base position and other pre-nominal modifiers are not case marked in Quechua (Muysken 2013) and in Turkish, unlike in Russian for instance. 'e,' in the following examples, indicates the base position of a floated quantifier.)

(159) a. [e qulqi-y-ta] tari-rqa-ni llpi-n-ta.
money-1S-ACC find-PST-1S all-3S-ACC
I found all my money.

b. *[e adamlar-ı] gör-üyor-um bütün-ü.
men-ACC see-PRES-1S all-ACC
Intended: I see all the men. Muysken (1989)

However, the grammaticality of (160a), where the quantifier *bütün* is not case marked, suggests that the ungrammaticality of (159b) follows from the lack of case

marked modifiers in Turkish, scrambled or not. It does not follow from the across the board unavailability of operations that move quantifiers away from the noun they combine with.

(160) a. Quantifier floated from an object QP
(Bütün) adam-lar-ı gör-dü-m (%bütün).
all.NOM man-P-ACC see-PST-1S all.NOM
I saw all the men.

b. Quantifier floated from a subject QP
(Bütün) araba-lar sat-ıl-dı (%bütün).
all.NOM car-P sell-PASS-PST.3S all.NOM
All the cars were sold.

The variants of (160a) and (160b) with the 'floated' quantifier are degraded for some speakers of Turkish. For speakers who accept them, there is a sharp contrast with the unacceptable (159b). This suggests, in turn, that quantifier floating is available with *bütün*.

The examples in (161) list additional quantifiers that can float ('many, few, *birtakım* some') and others that cannot ('each, most, *bazı* some'). The sentences are all grammatical with the quantifiers in their base positions ('e').

(161) a. Parti-ye [e öğrenci] gel-di çok / az.
party-DAT student come-PST.3S many / few
Many / a small number of students came to the party.

b. Sokak-ta [e denizci] var-dı bir-takım.
street-LOC sailor EX-PST.3S one-team
There were some sailors on the street

c. [e adam-ı] gör-dü-m *her / *çoğu.
man-ACC see-PST-1S each / most
I saw each / most of the men.

d. [e adamlar-ı] gör-dü-m *bazı.
men-ACC see-PST-1S some
I saw some of the men.

Numerals and *birkaç*, 'a few,' cannot occur in derived positions unless they combine with a classifier.

(162) [e kitap] oku-du-m iki / bir-kaç *(tane).
book read-PST-1S two / one-how.many CL
I read two / a few books.

Quantifiers in genitive possessive constructions can freely be scrambled away from the genitive phrase, their restrictor.

(163) Parti-ye [öğrenci-ler-in e] gel-di hep-si / ikisi de / çoğ-u.
party-DAT student-P-GEN come-PST.3S all-POSS / two-POSS also / most-POSS
The students all / both / *most came to the party.

3.7 Bare Quantifiers

3.7.1 As Predicates

The types of quantifiers that can occur as bare predicates are value judgment quantifiers, numerals and some proportional quantifiers. For the latter two, the subject of the predicate is obligatorily a 'number of' or 'proportion of' phrase. The examples here are all in the past tense to show that predicate morphology appears on the quantifier (recall that the third person present copula is not an overt morpheme).

(164) a. Sınıf-ı geç-en öğrenci çok-tu / az-dı / çok fazla-ydı.
class-ACC pass-SREL student many-COP.PST.3S / few-COP.PST.3S / very too.many-COP.PST.3S
The students who passed the class were many / few / very many.

b. Bu sınıf-ta kadın *(sayı-sı) dört-tü.
this class-LOC woman number-POSS four-COP.PST.3S
The number of women in this class was four.

c. Bu sınıf-ta kadın *(oran-ı) dört-te bir-di.
this class-LOC woman proportion-POSS four-LOC one-COP.PST.3S
The proportion of women in this class was one to four.

3.7.2 As Arguments

In the following sentences, intersective, co-intersective and proportional quantifiers are inserted in the three argument slots of a ditransitive frame. Their ungrammaticality suggests that simple quantifiers do not occur as bare arguments in Turkish.

(165) a. As subjects
*İki / bazı / her / üç-te bir Ali-ye mektub-u yolla-dı.
two / some / every / three-LOC one Ali-DAT letter-ACC send-PST.3S
Intended: *Two / some / *every / one third sent Ali the letter

b. As indirect objects
*Ayşe iki-ye / bazı-ya / her-e / üç-te bir-e
Ayşe two-DAT / some-DAT / every-DAT / three-LOC one-DAT
mektub-u yolla-dı.
letter-ACC send-PST.3S
Intended: Ayşe sent the letter to *two / some / *every / *one third.

c. As direct objects
*Ayşe Ali-ye iki-yi / bazı-yı / her-i / üç-te
Ayşe Ali-DAT two-ACC / some-ACC / every-ACC / three-LOC
bir-i yolla-dı.
one-ACC send-PST.3S
Indended: Ayşe sent two / some / *every / one third to Ali.

Expressing possessive morphology on quantifiers that are compatible with it allows them to be used as arguments. *Her* does not occur with possessive morphology and is only grammatical when used with a noun.

(166) Ayşe Ali-ye iki-si-ni / bazı-ları-nı / üç-te
Ayşe Ali-DAT two-3S.POSS-ACC / some-3P.POSS-ACC / three-LOC
bir-i-ni yolla-dı.
one-3S.POSS-ACC send-PST.3S
Ayşe sent two (of them) / some (of them) / one third (of it) to Ali.

Value judgment quantifiers seem to occur in argument positions.

(167) Kravat-lar ucuz-du, ve çok / ama az al-dı-m.
tie-P cheap-COP.PST.3S and many / but few buy-PST-1S
The ties were cheap, so I bought many / but I bought few.

But, they are ungrammatical when suffixed with overt case morphology.

(168) *(Kravat-lar-dan) az-ı al-dı-m.
tie-P-ABL few-ACC buy-PST-1S
Intended: I bought few of the ties.

This suggests that it is reasonable to think that they are modifiers, rather than arguments. Building on the previous result on value judgment quantifiers in ablative partitives (see the relevant section above), and observing that the quantifiers in (167) seem to be quantifying over 'ties' rather than over events of 'buying,' an hypothesis about the underlying structure of the sentence is given in (169). 'Bare' value judgment quantifiers are not arguments, but they are not necessarily modifiers of the predicate either. Instead, they modify a null partitive quantifier. Angle brackets, in the following, represent silent, but semantically contentful material:

(169) [<kravat-lar-dan> az / çok <bir miktar>] al-dı-m.
tie-P-ABL little / much an amount buy-PST-1S
I bought few/many ties. (Approx: I bought a small/large quantity of ties.)

Both the restrictor and the quantifier are silent. The availability of a silent restrictor is motivated by the context dependency of what 'bare' value judgement quantifiers quantify over. That of the silent quantifier comes from a particular analysis of partitive constructions (Kornfilt 1996b). In brief, bare quantifiers do not seem to be able to occur as arguments.

3.8 Relations Between Lexical Universal, Existential and Interrogative Pronouns

The only *wh-* words that are morphologically related to any universal and existential pronouns are *kim*, 'who,' and *kaç*, 'how many.'

(170) a. kim, kim-i, (hiç) kim-se
who who-POSS *hiç* who-COND
who, some, anyone

b. kaç, bir kaç
how.many one how.many
how many, some

Note that although *kim*, 'who,' asks for a human referent, the noun that *kimi*, 'some,' combines with does not need to be human, nor animate.

(171) kimi insan-lar, kimi araba-lar
some human-P some car-P
some people, some cars

Free choice items are formed by using the universal distributive *her*, followed by the *wh-* word *hangi*, 'which.' The resulting *herhangi* combines with an indefinite noun and gives rise to genuine free choice readings as in (172) or to indefinite NPI meanings as in (172b).

(172) a. Free choice meaning
İste-diğ-in her-hangi bir yemeğ-i yiy-ebil-ir-sin.
want-NMZ-2S every-which one food-ACC eat-ABIL-AOR-OPT.2S
You can eat whichever food you want.

b. Indefinite meaning
Her-hangi bir şey iste-mi-yor-um.
every-which a thing want-NEG.PRES.PROG-1S
I don't want anything.

In biclausal conditional sentences, *wh-* words carry universal quantificational force by themselves. They optionally occur with the universal distributive *her*.

(173) a. (Her) ne ye-se-m, mutlu olu-yor-um.
every what eat-COND-1S happy be-PRES-1S
Whatever I eat makes me happy.

b. Sınav-ı (her) kim bitir-ir-se ödül al-acak.
exam-ACC every who finish-AOR-COND prize get-FUT.3S
Whoever finishes the exam will get a prize.

The *wh-* phrases *nasıl*, 'how,' and *neden*, 'why,' do not occur in the specific constructions above. The former is licensed in the following constructions with universal quantificational force, the latter does not appear to be able to receive such interpretations.

(174) Sınav-ı nasıl / *neden bitir-ir-se-n bitir, ödül al-acak-sın.
exam-ACC how / why finish-AOR-COND-2S finish prize win-FUT-2S
However / *whyever you finish the exam, you.'l get a prize.

3.9 Decreasing D-Quantifiers

3.9.1 Generation

The following examples illustrate decreasing D-Quantifiers.

(175) a. Intersective
Beş-ten az öğrenci katıl-dı.
five-ABL few student attend-PST.3S
Fewer than five students attended.

b. Proportional
Sınav-ı öğrenci-ler-in yarı-sı-ndan az-ı geç-ti.
exam-ACC student-P-GEN half-POSS-ABL few-POSS pass-PST.3S
Less than half of the students passed the exam.

Recall that Turkish does not have D-Quantifier equivalents of 'no.'and 'not.' Meanings equivalent to 'no + N' and 'not all + N' are rendered respectively by using

the NPI *hiçbir* and a universal quantifier, in conjunction with a negative predicate. As the entailment pattern in (176) shows, *hiçbir* is decreasing on its first argument and can be classified as a decreasing D-Quantifier.

(176) a. Intersective
Hiç-bir öğrenci ders-e gel*(-me)-di.
hiç-one student class-DAT come-NEG-PST.3S
No student came to the lecture.

b. Hiç-bir kız öğrenci ders-e gel*(-me)-di.
hiç-one girl student class-DAT come-NEG-PST.3S
No girl student came to the lecture. (176a) → (176b)

However, *her* is not decreasing on its first argument.

(177) a. Co-intersective
Her çocuk ağla-ma-z.
every child cry-NEG-AOR.3S
Not all children cry.

b. Her kız çocuğ-u ağla-ma-z.
every girl child-POSS cry-NEG-AOR.3S
Not all girl children cry. (177a) ↛ (177b)

It can thus be claimed that Turkish does not possess co-intersective decreasing D-Quantifiers, while intersective and proportional decreasing D-Quantifiers are productively available.

3.9.2 NPI Licensing

Downward entailing quantifiers do not license NPIs in Turkish.

(178) *Öğrenci-ler-in yarı-sın-dan az-ı hiç Pinsk-e git-miş.
students-P-GEN half-POSS-ABL few-POSS ever Pinsk-DAT go-EVID.3S
Intended: Less than half of the students have ever been to Pinsk.

For downward entailing quantifiers that occur with negative predicates, it is negation that appears to be licensing NPIs, not the quantifiers themselves.

(179) Hiç-bir çocuk hiç-bir kitab-ı oku*(-ma)-dı.
hiç-one child *hiç-one* book-ACC read-NEG-PST.3S
No child read any book. Bošković and Şener (2014)

Two NPIs that are not formed with *hiç* are provided in (180). These are *kattiyen* and *sakın*. The latter is only used in imperatives.

(180) a. O para-ya kattiyen dokun*(-amaz)-sın.
that money-DAT in.any.way touch-ABIL.NEG-2S
You may not touch that money in any way.

b. Sakın bura-ya gel*(-me)!
sakın here-DAT come.IMP-NEG
Don't you ever/dare come here! Adapted from Kelepir (2001)

NPI licensers other than negation do not appear to have been explored much in Turkish, see Kelepir (2001). The following examples show that downward monotone sentential operators do license some NPIs. 'Strong' NPIs formed with *hiç* are not licensed, 'weak' ones like bare *kimse* are.

(181) a. Parmağ-ın-ı kımıldat-acağ-ın-dan şüpheli-yim.
finger-3S.POSS-ACC move-NMZ-3S.POSS-ABL dubious-COP.1S
I doubt that he will lift a finger.

b. (*Hiç)-kimse-nin gel-eceğ-in-den şüpheli-yim.
hiç-anyone-GEN come-NMZ-3S.POSS-ABL dubious-COP.1S
I doubt that anybody will come.

As illustrated by the contrast in (182), universal quantifiers disrupt NPI licensing.

(182) a. Bazı çocuk-lar hiç ağla*(-ma)-z.
some child-p *hiç* cry-NEG-AOR.3S
Some children don't ever cry.

b. *Her çocuk hiç ağla-ma-z.
every child ever cry-NEG-AOR.3S
Intended: *Every child doesn't ever cry.

3.10 Distribution

Quantified NPs occur in all major grammatical roles.

(183) a. Subject
Her / üç öğrenci gel-di.
every / three student come-PST.3S
Every student / three students came.

b. Direct object
Can sadece iki / iki-si hariç her soruyu cevapla-dı.
Can only two / two-POSS except each question answer-PST.3S
Can answered only two / all but two questions.

c. Other case marked nominals: dative
Kütüphane her / bir kaç öğrenci-ye uyarı yolla-dı.
library every / one how.many student-DAT notice send-PST.3S
The library sent a notice to every / several students.

d. Other case marked nominals: locative
Bazı şehirler-de olay-lar ol-du.
some cities-LOC incident-P be-PST.3S
Incidents occurred in some cities.

e. Complement of postposition
Öğrenci-ler-in dört-te üç-ü için yemek yap-tı-m.
student-P-GEN four-LOC three-ACC for food make-PST-1S
I made food for three fourths of the students.

f. Possessor
İki öğrenci-nin doktor-u tutuk-lan-dı.
two student-GEN doctor-ACC arrest-PASS-PST.3S
Two students' doctors got arrested.

General restrictions on where noun phrases may appear apply to quantifier phrases, but to my knowledge no restriction targets quantifier phrases in particular. Two of them are illustrated below.

First, as in (184), if a non-case marked direct object occurs in positions other than the immediate preverbal position, either ungrammaticality or else marked readings arise. Some grammatical movement operations that target bare objects are discussed in Gračanin-Yüksek and İşsever (2011).

(184) a. Non-case marked preverbal direct object
Ali hızlı hızlı (bir kaç) kitap oku-du.
Ali quick one how.many book read-PST.3S
Ali quickly read (several) books

b. Non-case marked non-preverbal direct object
*Ali (bir kaç) kitap hızlı hızlı oku-du.
Ali one how.many book quickly read-PST.3S
Intended: Ali quickly read (several) books.

c. Case marked non-preverbal direct object
Ali (bir kaç) kitab-ı hızlı hızlı oku-du.
Ali one how.many book-ACC quickly read-PST.3S
Ali quickly read several books / the book.
Adapted from Öztürk (2005)

Second, as in (185), *wh-* phrases (Göksel and Özsoy 2000) and constituents focused by *only* cannot follow the verb selecting them. Quantifiers are equally affected by the restriction. In the following, 'e' marks the base, preverbal position of the quantifiers.

(185) a. No postverbal *wh-* phrase
*e gel-di öğrenci-ler-in yüz-de kaçı?
come-PST.3S student-GEN hundred-LOC how.many-POSS
Intended: What percent (lit. how many out of a hundred) of students came?

b. No post-verbal *only* phrase
*e gel-di sadece üç öğrenci.
come-PST.3S only three student
Intended: Only three students came.

3.11 Scope Ambiguities

3.11.1 Scope Rigidity

For quantifier phrases occurring in the preverbal field, Turkish is held to be a 'scope rigid' language Kural (1992): If one quantifier phrase linearly precedes another, it takes wide scope over the other.

This claim is supported by examples (187) and (189). A proportional quantifier phrase linearly precedes a universal, and inverse scope readings are unavailable.[31] For each sentence, the context provided renders the surface scope reading false (proportional over universal), while rendering the inverse scope reading true (universal over proportional). It is then observed that the sentence at hand is false given the situation described, which in turn suggests the unavailability of an inverse scope reading.

Let there be three editors, John, Mary and Bill, and three books, *1984*, *Snow* and *The Europeans*. The context in (186) describes who read which book.

(186) Context for sentence (187):

Book	Read by
1984	John, Mary
The Europeans	Mary, Bill
Snow	John, Bill

Sentence (187) is false given the situation described in (187).

[31] See Kelepir (2001) and Kural (1992) for further examples.

(187) Çoğu editör her kitab-ı oku-du.
most editor every book-ACC read-PST.3S
Intended: Every book was such that it was read by most of the editors.
Available: Most of the editors were such that they read every book.

In sentence (189), a proportional quantifier phrase again precedes a universal, but unlike in (187), the first quantifier phrase is an object and the second, a subject. The sentence is false, given the context in (188).

(188) Context for sentence (189):

Editor	Book read
John	*1984*, *Snow*
Mary	*Snow*, *The Europeans*
Bill	*1984*, *The Europeans*

(189) Çoğu kitab-ı her editör oku-du.
most book-ACC every editor read-PST.3S
Intended: Every editor is such that he read most of the articles. Available: Most of the books are such that they were read by every editor.

This suggests that linear order determines the relative scope of two quantifier phrases, regardless of what specific type of arguments the quantifier phrases are.

3.11.2 Preferred Collective Readings

If two quantifier phrases are both introduced by numerals, collective readings are preferred over distributive ones. In the two examples in (190), aside from the most accessible collective reading, a single distributive reading is available, where the relative scope of the quantifier phrases corresponds to their surface order. ('SWS' and 'OWS' are abbreviations respectively for subject and object wide scope.)

.

(190) a. Üç eğitmen yüz sınav-a bak-tı.
three instructor hundred exam-DAT look-PST.3S
Available: A group of three instructors looked at a group of a hundred exams.
Marginal SWS: There are three instructors who each looked at a hundred (potentially distinct) exams.
Unavailable OWS: There are a hundred exams such that each exam was looked at by three instructors.

b. Yüz sınav-a üç eğitmen bak-tı.
hundred exam-DAT three instructor look-PST.3S
Available: A group of three instructors looked at a group of a hundred exams.
Unavailable SWS: There are three instructors who each looked at a hundred exams.
Marginal OWS: There are a hundred exams such that each exam was looked at by three (potentially distinct) instructors.

The readings noted marginal above are made more prominent in list contexts such as in (191). (Jaklin Kornfilt, personal communication, Sept. 28, 2014, reports that this sentence is degraded in her dialect, due to an independent restriction on forward gapping. For such dialects, the reported reading is available if the complement of the numeral quantifier, 'exam,' is expressed in the second conjunct.)

(191) Üç eğitmen yüz sınav-a bak-tı, iki eğitmen-se on
three instructor hundred exam-DAT look-PST.3S two instructor-as.to ten
(sınav-a).
exam-DAT
Three instructors looked at a hundred exams each, and two instructors to ten each.

Distributive readings may be enforced with the modifier *N* + *başı*, 'per head' or with the distributive suffix *-şAr*.

(192) Üç eğitmen kişi baş-ı yüz / yüz-er sınav-a
three instructor person head-POSS hundred / hundred-DIST exam-DAT
bak-tı.
look-PST.3S
Three instructors looked at a hundred exams each.

Collective readings, on the other hand, are enforced by *toplam*, 'in total' or *beraber*, 'together.'

(193) Üç eğitmen beraber / toplam yüz sınav-a bak-tı.
three instructor together / total hundred exam-DAT look-PST.3S
Three instructors (together) graded a hundred exams (in total).

3.11.3 *Wh-* Questions

If a single predicate has both a *wh-* phrase and a quantifier phrase as its arguments, pair-list readings are unavailable. In (194a), a control sentence, a universal quantifier

phrase linearly precedes a numeral. The surface scope, distributive reading is available. In (194b), the universal precedes a *wh-* phrase. The pair-list reading, expected if the universal took scope over the *wh-* operator, is unavailable.

(194) a. Her soru-ya iki öğrenci cevap ver-di.
every question-DAT two student answer give-PST.3S
Available: For every question, two students answered it.

b. Her soru-ya hangi öğrenci cevap ver-di?
every question-DAT which student answer give-PST.3S
Unavailable: For every question, which student answered it?
Available: Which is the student such that he answered every question?
Felicitous answer: Bill.
Infelicitous answer: Can answered Question 1, Bill, Question 14, etc.

This observation suggests that quantifier phrases obligatorily scope lower than *wh-* operators.[32]

The *unavailability* of a pair-list reading is important for the conclusion that inverse scope is observed in (194b). This is because any context that makes a $\exists > \forall$ reading (the available, non-pair-list inverse scope reading) true, makes a $\forall > \exists$ reading (the unavailable pair-list surface scope reading) true. For this reason, if a pair-list reading were available, we could not conclude from the additional availability of a non-pair-list reading, that inverse scope was observed.

This result is consistent with the availability, in Turkish, of covert *wh-* movement and the unavailability of long distance quantifier raising. (Short distance QR is probably required for independent interpretive purposes.) Covert *wh-* movement accounts for the *wh-* word taking wide scope over the quantifier. The unavailability of long distance QR accounts for the inability of the quantifier to take even wider scope.

The lack of a pair-list reading does not depend on the argument status of the *wh-* phrase and the quantifier phrase. In (195), a *wh-* phrase indirect object linearly follows a universal quantifier phrase subject.

[32] Pair-list readings are otherwise available in Turkish multiple *wh-* questions:

(vi) Hangi öğrenci hangi soru-ya cevap ver-di?
which student which question-DAT answer give-PST.3S
Which student answered which question?
Infelicitous answer: Bill.
Felicitous answer: Can answered Question 1, Bill, Question 14, etc.

(195) Her öğrenci hangi soru-ya cevap ver-di?
every student which question-DAT answer give-PST.3S
Available: Which is the question such that every student answered it?
Unavailable: For every student, which is the question that he answered?
Infelicitous answer: Question 14.
Felicitous answer: Can answered Question 1, Bill, Question 14, etc.

The other possible linear order, with the *wh-* phrase *preceding* the quantifier, does not make the pair-list reading available. This is expected, in the absence of long distance QR. There is, however, an interpretive difference between the two linear orders. This is more easily detectable with the *wh-* phrase 'how many.' In (196), the *wh-* phrase precedes the universal.

(196) Kaç soru-ya her öğrenci cevap ver-di?
how.many question-DAT every student answer give-PST.3S
What is the number of those (same) questions that all the students answered?
Felicitous answer: 14 questions.
Infelicitous answer: Can answered 14 questions, Bill 12 questions, etc.

The meaning that arises is that there is a single specific set of questions that every student was able to answer. The speaker is asking for the number of questions in that common set.

In (197), with the universal preceding the *wh-* phrase, the set of specific questions that every student answered can covary with the student, but their number does not.

(197) Her öğrenci kaç soru-ya cevap ver-di?
every student how.many question-DAT answer give-PST.3S
What is the number of (potentially different) questions that every student answered?
Felicitous answer: 14 Questions.
Infelicitous answer: Can answered 14 questions, Bill 12 questions, etc.

This question is felicitous in a situation like the following. Both science and humanities majors took the exam. A subset of the total number of questions is common to both majors, but there are field specific questions to be answered by science or by humanities majors only. The total number of questions answered by every student, however, is the same.

3.11.4 Nominal and Verbal Quantifiers

Predicates can have a quantified argument while being modified by an A-Quantifier. In this case, the meaning of the sentence depends on the surface order of the quantifiers.

(198) a. İki oğlan üç defa şarkı söyle-di. 1379
two boy three times song sing-PST.3S
There are two boys who sang three times each.

b. Üç defa iki oğlan şarkı söyle-di. 1380
three times two boy song sing-PST.3S
On three occasions there were two boys who sang.

3.11.5 Quantifiers and Negation 1381

Intersective and co-intersective quantifiers respectively scope above and below negation, in (199a), (Kelepir 2000, 2001).

(199) a. Bazı öğrenci-ler gel-me-di. 1382
some student-P come-NEG-PST.3S
Unvailable: It is not the case that some students came. *¬ > ∃
Available: Some students are such that they didn't come. ∃ > ¬

b. Her öğrenci gel-me-di. 1383
every student come-NEG-PST.3S
Available: It is not the case that every student came. ¬ > ∀
Unavailable: Every student is such that he didn't come. *∀ > ¬

It is interesting that both the available and the unavailable readings are logically equivalent. 1384 1385

With a proportional quantifier, the reading where the quantifier scopes over negation is preferred over the one with negation over the quantifier. If 'even' is used on the quantifier phrase, the narrow scope reading is the only one available. 1386 1387 1388

(200) In a class with 20 students: 1389

a. Öğrenci-ler-in dört-te bir-i gel-me-di. 1390
student-P-GEN four-LOC one-POSS come-PST.3S
Preferred: A fourth of the students are such that they didn't come. (15 present)
Dispreferred: It is not the case that a fourth of the students came. ($n < 5$ present)

b. Öğrenci-ler-in dört-te bir-i bile gel-me-di. 1391
student-P-GEN four-LOC one-POSS even come-PST.3S
Unavailable: A fourth of the students are (even) such that they didn't come. (15 present)
Available: It is not the case that (not even) a fourth of the students came. ($n < 5$ present)

In negative existential constructions, it is possible to access a slightly marginal reading where a universal scopes over negation, in (201a). It is not possible, however, to obtain a reading where an existential scopes under negation.[33]

(201) a. Bugün herkes orta-da yok.
today everyone middle-LOC NEGEX
Preferred: Not everybody is around today. ¬ > ∀
Dispreferred: Nobody is around today. ∀ > ¬

b. Bugün bazı öğrenci-ler orta-da yok.
today some student-P middle-LOC NEGEX
Available: Today, there are students who aren't around. ∃ > ¬
Unavailable: Today, no student is such that he is around. *¬ > ∃

3.12 One to One Dependency

A one to one dependency between two noun phrases is expressed by using the postposition *için*, 'for,' or the dative. A distributive universal quantifier is obligatorily expressed with the first dependent noun phrase.

(202) a. Yağ-an *(her) damla için bir çiçek büy-ür.
rain-SREL every drop for a flower grow-AOR.3S
For every drop that rains, a flower grows.

b. Yağ-an *(her) damla-ya bir çiçek büy-ür.
rain-SREL every drop-DAT a flower grow-AOR.3S
For every drop that rains, a flower grows.

The dative can also appear on the distributive noun *başı* (see the Sect. 3.3 on distributive numerals), in which case expressing the quantifier *her* becomes optional.

(203) Yağ-an (her) damla baş-ı-na bir çiçek büy-ür.
rain-SREL every drop head-POSS-DAT a flower grow-AOR.3S
For every drop that rains, a flower grows

[33] Sentences with *her*, the distributive universal quantifier, with a positive existential predicate are subject to the definiteness effect and ungrammatical. White et al. (2011), however, observe that negative predicates obviate the effect.

3.13 Rate Phrases

Rate phrases are expressed in the locative case.

(204) a. John yüz-ü-nü gün-de üç defa yık-ar.
John face-POSS-ACC day-LOC three time wash-AOR.3S
John washes his face three times a day.

b. Bu tren saat-te altmış kilometre hız-la ilerl-iyor.
this train hour-LOC sixty kilometer speed-COMIT advance-PRES.3S
This train is running at sixty kilometers per hour.

3.14 Concluding Spot Checks

Turkish has:

1. two monomorphemic equivalents of 'all,' *tüm* and *bütün*,
2. a monomorphemic equivalent of 'one,' *bir*, giving rise to both numeral and indefinite readings,
3. a monomorphemic equivalent of 'many,' *çok*,
4. no monomorphemic determiner translating 'no,'
5. a distributive universal quantifier, *her*, distinct from the collective *tüm* and *bütün*,

3.14.1 Morphological Complexity of A- and D-Quantifiers

It is difficult to decide which of A-Quantifiers or D-Quantifiers are, in the general case, morphologically simpler. Monomorphemic A-Quantifiers exist, listed in (205):

(205) Monomorphemic A-Quantifiers
hiç, hep
ever, always

While some A-Quantifiers derive from D-Quantifiers, like those in (206a), some D-Quantifiers apparently derive from A-Quantifiers, like those in (206b).

(206) a. on defa, her zaman
ten times every time
ten times, always

b. hiç bir öğrenci + NEG, çocuklar-ın hep-si
hiç one student children-GEN *hep*-POSS
no student, all of the children

Additionally, some D-Quantifiers are identical in form with A-Quantifiers:

(207) a. Çok öğrenci-ye bağır-dı-m. Öğrenci-ye çok bağır-dı-m.
çok student-DAT yell-PST-1S student-DAT *çok* yell-PST-1S
I yelled at many students. I yelled a lot to the student.

b. Bir-az altın kazan-dı-m. Bir-az uyu-du-m.
biraz gold win-PST-1S *biraz* sleep-PST-1S
I won a small quantity of gold. I slept a little.

And at least one common morphological process derives both D-Quantifiers and A-Quantifiers: *cA* suffixation.

(208) defa-lar-ca koş-mak, yüz-ler-ce adam
times-P-*cA* run-INF hundred-P-*cA* man
to run many times, hundreds of men

3.14.2 Only

Turkish has four equivalents of 'only.'

(209) a. Parti-ye (bir) tek / sadece / yalnızca / sırf Can gel-di.
party-DAT one single / only / only / only Can come-PST.3S
Only Can came to the party.

b. Parti-ye ?(bir) tek / sadece / yalnızca / sırf beş öğrenci
party-DAT one single / only / only / only five student
gel-di.
come-PST.3S
Only five students came to the party.

c. Can *(bir) tek / sadece / yalnızca / sırf dans et-ti, şarkı
Can one single / only / only / only dance LV-PST.3S song
(da) söyle-me-di.
also sing-NEG-PST.3S
Can only danced, he didn't (also) sing.

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AQ1. Kindly check whether the updated correction is fine.