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Negative Dependencies in Turkish

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Abstract: In this paper, we provide an overview of negative dependencies in Turkish. The first are elements such as *hiçkimse*, which sometimes seem to mean 'anybody' and sometimes 'nobody'. We argue that unlike a standard Negative Polarity Item (NPI) like English *anybody*, these items should be analyzed as neg-words licensed under Negative Concord (NC). We also discuss further properties of these items, including whether they are universals or existentials. The second set of items that display a negative dependency are universal quantifiers such as *herkes* 'everybody'. Unlike their counterparts in many languages, these items obligatorily scope under negation, which raises the question of why a universal is sensitive to negation in the way it is. We account for this behavior in terms of negative polarity sensitivity based on a referentiality requirement we dub the Non-Entailment-of-Non-Existence Condition, following a particular analysis of a class of NPIs in Mandarin. The final case of negative dependency we evaluate is modals that have to scope under or above negation. These cases constitute instances of polarity sensitivity in English and beyond, especially clearly in the case of modal PPIs. We show that in Turkish, however, they do not, and the apparent negative dependency follows from the syntax of Tense-aspect-modality (TAM) morphology.

Keywords: negation; Negative Concord; Negative Polarity Items; modals; Turkish

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1. Introduction

A familiar type of negative dependency is exemplified by existential Negative Polarity Items (NPIs) in languages like English, illustrated in (1) with *anybody*. Such elements can only appear alongside negation and in other Downward-Entailing (DE) or Non-Veridical (NV) contexts, including antecedents of conditionals and content questions (Ladusaw 1979; Giannakidou 2000, among others). They are not in themselves negative, unlike negative quantifiers like *nobody*.

(1) a. *Sue saw anybody.
b. Sue did not see anybody.
c. If Sue sees anybody, she will let me know.
d. Who saw anybody?

Next to such English-like NPI-hood, several other kinds of negative dependencies have been identified, the most prominent of which is Negative Concord (NC; Giannakidou 2000; Zeijlstra 2004; Giannakidou and Zeijlstra 2017 a.o.). Negative Concord Items (NCIs), or neg-words, are the most restrictive kind of NPIs in that they are only licensed under negation and not under other DE/NV contexts (Giannakidou and Zeijlstra 2017). While these elements require licensing by negation just like *anybody*, they can induce semantic negation on their own, as the name neg-word implies, unlike *anybody*. This can be seen in their ability to answer a question negatively in fragment answers. (2) exemplifies the negative sensitivity of the Greek neg-word stressed *TIPOTA* in (2a) and its ability to induce semantic negation as exhibited by a fragment answer (2b).[1]

(2) a. *(Dhen) ipa TIPOTA.
not said.1sg n-thing
'I didn't say anything.'
b. A: Ti idhes?
what saw.2sg
'What did you see?'
B: TIPOTA.
n-thing
'Nothing.'/'#Anything.' (Giannakidou 2000)

Notice that *TIPOTA* acts like *nothing* in the fragment answer, whereas it acts like *anything* in the full sentence. This is the prime blueprint of a neg-word. Various attempts have been made to account for this dual behavior of neg-words, from syntactic licensing mechanisms (Zanuttini 1991; Watanabe 2004; Zeijlstra 2004, 2022) to restrictive semantic formulations (Ladusaw 1992; Giannakidou 2000, 2006). It is similarly debated whether these elements are existentials or universals in their various realizations across languages (cf. Giannakidou 2000; Zeijlstra 2004, 2022 a.o.). We remain theory-neutral in this article regarding the first point, but in Section 2, we will analyze a class of negative dependents in Turkish as neg-words and address the question of whether they are existentials or universals.

Another kind of negative dependency that goes beyond English-type NPI-hood is exhibited by quantifiers that are otherwise transparent universals that have to scope in a certain way with respect to negation. For example, in Dutch, *iedereen* 'everybody' obligatorily scopes over negation, instead of the two scopal construals available to English *everybody* in such constructions.

(3) Iedereen vertrok niet.
everybody left not
'Nobody left.' $\forall > \neg; *\neg > \forall$ (Zeijlstra 2017)

Conversely, sometimes universals can avail themselves only of narrow scope readings with respect to negation. Amiraz (2021) calls these constructions where a universal subject precedes, yet undescopes, negation, inverse scope constructions.

(4) All that glitters is not gold. $\neg > \forall; *\forall > \neg$

There is comparatively little work on these phenomena in the literature. Zeijlstra (2017) argues that Dutch universals scoping above negation are effectively Positive Polarity Items (PPIs). The common wisdom regarding narrow scope universals is that languages that have no other transparent way to express this scope configuration exceptionally allow this reading under rules of blocking (Szabolcsi 1997 a.o.). We know of no treatment of universals that systematically prefer or require an inverse scope reading. In Section 3, we argue that Turkish universals exhibit exactly this pattern and sketch a preliminary analysis in terms of a referentiality requirement we call the *Non-Entailment-of-Non-Existence Condition* (NENEC).

A third kind of negative dependency observed in the literature concerns modals. Modals behave like quantifiers over individuals in many respects (Kratzer 1991), and hence they *à priori* may be subject to similar polarity and dependency relations. Based on this reasoning, Iatridou and Zeijlstra (2010, 2013) argue that the otherwise mysterious scope restrictions on modals such as English *need* and *must* arise due to a kind of negative dependency (5).[2] In this approach, *need* is an NPI (it clearly requires negation; cf. Van der Wouden 1994), whereas *must* is a PPI (it obligatorily scopes over negation).

(5) a. Mary need*(n't) leave.
b. Mary mustn't leave. $\Box > \neg; *\neg > \Box$

In Section 4, we will investigate whether a similar analysis can be pursued for Turkish modals, which have fixed scope with respect to negation but appear as suffixes on the verb in a concatenative morphological system, and conclude negatively.

As we will argue in the rest of this paper, Turkish is a language that exhibits NC and narrow scope universals, the latter being a crosslinguistically more novel finding. In addition, we will argue that modal scope in Turkish is better explained in terms of functional morphosyntax rather than polarity sensitivity. Our study will be descriptive, but we believe there are advantages to observing these lesser-understood negative dependencies in empirical detail within a single language.

Concretely, the three Turkish negative dependencies we will scrutinize in the rest of this paper are exemplified in (6).

(6) a. *Hiç*-expressions: Negative Concord
Deniz hiçbir şey bil*(-m)-iyor.[3]
Deniz n-one thing know-NEG-PRES
'Deniz knows nothing.'

b. *Her*-expressions: Narrow scope universals
Her öğrenci yürü-me-yecek.
every student walk-NEG-FUT
'Not every student will walk.' ¬ > ∀; *∀ > ¬

c. Modals with fixed scope with respect to negation
Oya dans et-me-yebil-ir.
Oya dance do-NEG-ABIL2-AOR
'Oya is allowed not to dance.' ◊ > ¬; *¬ > ◊

In (6a), we see a structure quite similar to (1a), which has led to expressions with *hiç* in Turkish being termed NPIs (Kelepir 2001; Özyıldız 2017, among many others), as they cannot appear without the negative suffix *-mA*.[4] We will demonstrate that their distribution is more complex and should not be analyzed as standard NPIs, unlike what is generally assumed in the Turkish literature (e.g., Kelepir 2001). In (6b), we see a (non-negative) universal subject quantifier taking obligatory scope under negation, despite Turkish being heavily scope-rigid (as discussed by Kelepir 2001).[5] In (6c), we find a modal that does the opposite, scoping obligatorily over negation. On the face of it, this could be a negative dependency, specifically a PPI dependency. However, we will argue that the source of this behavior is different from polarity sensitivity.

2. *Hiç*-Expressions and Negative Concord

In this section, we look at a class of negative dependents in Turkish that have previously been labeled NPIs. This analysis and some of the observations made in this section are based on Kelepir (2001), who considered these items to be NPIs due to their dependent behavior in relation to negation. However, we will argue that subsequent research on NC, especially on Strict NC (Giannakidou 2000, 2006; Zeijlstra 2004), provides a more fitting, stricter label for these expressions as neg-words. Once this is established, we will explore whether Turkish neg-words should be analyzed as universal or existential neg-words.

2.1. Negatively Marked Elements in Turkish

Turkish has a set of negatively marked elements requiring licensing by negation. A class of these are formed with the morpheme *hiç* 'n-at all' appearing on its own or as part of a paradigm of morphologically complex expressions, such as *hiçbir şey* 'n-one thing' (7). In examples like the latter, *hiç* is written together with *bir* 'one' by orthographic convention. Some expressions, like *asla* 'never' and *katiyyen* 'under no circumstances' do not include the morpheme *hiç* but nevertheless show similar licensing restrictions (also see Kelepir 2001).

(7) a. hiç 'n-at all, n-ever, n-amount'
b. (hiç) kimse 'n-person'[6]
c. hiçbir şey 'n-thing'
d. hiçbir yer 'n-place'
e. hiçbir zaman 'n-time'

There are no (near) homonyms to *hiç*-expressions; the items in (7) represent the entire set of items corresponding to both typical English NPIs like *ever* and *any x* and English negative quantifiers like *never* and *no x*. This is irrespective of factors such as stress, unlike, for example, in Greek (Giannakidou 2000). If the *hiç* morpheme is missing, these elements are plain indefinites:

(8) a. birisi/birileri 'someone' (lit: one of that/them)
b. bir şey 'something'
c. bir yer 'some place'
d. bir ara 'some time' (lit: one interval)

Turkish has only a limited set of expressions that require licensing by negation in NPI-like fashion, other than *hiç*-expressions. One such case is minimizers, which appear to be NPIs with a concealed *even* connotation, as in *tek kuruş* 'single dime' and *bir Allah'ın kulu* 'a soul (lit: one servant of god)'. (9) shows that each of these three kinds of negative dependents requires sentential negation. (9a) has a *hiç* expression, (9b) includes *katiyyen* 'under no circumstances', and (9c) contains a minimizer NPI. Sentential negation is expressed by the suffix *–mA* in the verbal complex.

(9) a. Recep hiçbir şey oku*(-ma)-z.
Recep n-one thing read-NEG-AOR
'Recep doesn't read anything.'
b. Kedi katiyyen dışarı çık*(-ma)-yacak.
cat under.n.circumstances out go-NEG-FUT
'The cat will under no circumstances go outside.'
c. Bütün gün dükkan-da dur-du-m ama bir Allah'ın kul-u gel*(-me)-di.
all day shop-LOC stay-PAST-1SG but one god-GEN servant-POSS3SG come-NEG-PAST
'I was at the shop all day but not a soul stopped by.'

We focus in this section on the first class of these negation-requiring items with *hiç*, and argue that they are so-called neg-words or NCIs, not standard NPIs. To support this, we will draw upon comparisons between *hiç*-expressions and minimizer NPIs, among other evidence.

2.2. NPI Licensing and Negative Concord in European Languages

The main difference between NPIs and neg-words is that the latter, but not the former, can induce negation on their own in particular contexts, for instance, in fragment answers (see Giannakidou 2006; Giannakidou and Zeijlstra 2017). To set up the comparison, we will first look at the behavior of neg-words and plain NPIs in other European languages.

Typical NPIs, such as English *anybody* and *ever*, are indefinites. They do not encode negativity in themselves but generally require licensing by DE or NV environments, including negation (10) (see Ladusaw 1992; Giannakidou 2000). The fact that they do not encode negation is manifested by the inability to answer a question negatively on their own (11).

(10) I will *(not) meet anybody this afternoon.

(11) A: Who did you say you will meet?
B: #Anybody. (intended: 'Nobody.')

By contrast, negative quantifiers such as English *nobody* do not require (in fact, reject in standard varieties unless double negation is intended) licensing by a negative marker and always encode negativity by themselves.

(12) I will (*not) meet nobody this afternoon.
(intended: 'I will not meet anybody this afternoon.')

(13) A: Who did you say you will meet?
B: Nobody.

Neg-words are elements that, in certain contexts, require licensing by negation, just like standard NPIs, while in other contexts they behave like negative quantifiers, giving rise to NC effects. NC is the phenomenon where multiple elements that in certain configurations yield semantic negation of their own, jointly yield only one. English does not employ neg-words; it is not an NC language (at least in the standard variety), but many languages do. One such language is Italian. Italian *nessuno* is best translated as 'anybody' in (14a), but as 'nobody' in (14b). (14c) shows that *nessuno* is fine in a fragment answer, inducing negation on its own.

(14) a. Non ha telefonato a nessuno.
Not has called to n-body
'She hasn't called anybody.'
b. Nessuno ha telefonato.
n-body called
'Nobody called.'
c. A: A chi ha telefonato?
to whom has called
'Whom has she called?'
B: A nessuno.
to n-body
'Nobody.' (Zeijlstra 2004)

In languages like Italian, postverbal neg-words must be licensed by a preverbal negative element (either the negative marker or a preverbal neg-word). Conversely, preverbal neg-words may not be licensed by the negative marker, as shown in (15). NC languages with such an asymmetry are called Non-strict NC languages.

(15) a. *(Non) ha telefonato a nessuno.
Not has called to n-body
'She hasn't called anybody.'
b. Nessuno (*non) ha telefonato.
N-body called
'Nobody called.' (Zeijlstra 2004)

Not all languages with neg-words have such restrictions with respect to the position of the neg-word. In so-called Strict NC languages, illustrated by Czech in (16), the negative marker must always accompany a neg-word, irrespective of the position of the neg-word in the clause, unlike in Italian. Only in fragment answers can neg-words induce semantic negation on their own (c).

(16) a. Dnes nikdo *(ne-)volá
today n-body NEG-calls
'Today nobody calls.'
b. Dnes *(ne-)vola nikdo.
Today NEG-calls n-body
'Today nobody calls.'
c. A: Co jsi viděla
What aux.2SG saw. SG.F
'What did you see?'
B: Nic.
n-thing
'Nothing.' (Radek Šimík, p.c.)

Next to the fact that plain NPIs can never induce semantic negation, but neg-words can (in any case in fragment answers), there is another characteristic difference between standard NPIs and neg-words. Most NPIs can be licensed, in addition to negation, in contexts such as polar and content questions and antecedents of conditionals (Ladusaw 1979; Giannakidou 2000; Giannakidou and Zeijlstra 2017 a.o.).[7] Neg-words, however, are only licensed by the negative marker (Zeijlstra 2004) and, in some cases, in polar questions.

Hence, an English NPI like *any* is licensed in content questions (17a), whereas neg-words like *nic* 'n-thing' in Czech are not (17b).[8]

(17) a. Who noticed anything suspicious?
b. *Kdo viděl nic?
who saw.SG.M n-thing
('Who saw anything (at all)?') (Radek Šimík, p.c.)

Another notable difference between standard NPIs and neg-words is that the licensing of neg-words is subject to syntactic locality, but NPI licensing is not. For this reason, the English NPI *any* is licensed in an adjunct island (18a), but Italian *niente* is not (18b):

(18) a. Gianni doesn't work in order to earn any money.
b. *Gianni non labora per guadagnare niente argente.
Gianni not works in.order.to earn no money
('Gianni doesn't work in order to earn any money.') (Zeijlstra 2022)

2.3. NPI Licensing and Negative Concord in Turkish

The first of our claims regarding Turkish negative dependencies is that Turkish expressions with *hiç* are neg-words and not plain NPIs (*contra* Kelepir 2001); hence, Turkish is an NC language. It is, in fact, a Strict NC language, as the subject position is also licensed by sentential negation (19b).

(19) a. Bugün hiçkimse-yle toplantı yap*(-ma)-yacağ-ım.
today n-body-COM meeting do-NEG-FUT-1SG
'I will meet nobody today.'
b. Hiçbir öğrenci toplantı-ya gel*(-me)-di.
n-one student meeting-DAT come-NEG-PAST
'No student came to the meeting.'

Evidence for this comes from the fact that neg-words require a negative marker as a licenser (19), similar to NPIs, but can appear on their own in a fragment answer with the meaning of a negative quantifier (also see Kelepir 2001) (20).

(20) A: Kim-inle toplantı yap-acak-tı-n?
Who-COM meeting do-FUT-PAST-2SG
'Who did you say you were meeting?'
B: Hiçkimse-yle.
n-body-COM
'With nobody.'

Turkish neg-words further behave on par with NC items in that they require licensing by the negative marker and not just any DE/NV context, as shown in (21) below (also see Kelepir 2001). Contexts such as content questions and antecedents of conditionals do not license *hiç*-expressions; the negative marker is required.

(21) a. *Kim şüpheli hiçbir şey fark et-ti?
who suspicious n-one thing notice do-PAST
('Who noticed anything suspicious?')
b. *şüpheli hiçbir şey fark ed-er-se-niz biz-i ara-yın.
suspicious n-one thing notice do-AOR-COND-2PL we-ACC call-IMP.2PL
('Give us a call if you notice anything suspicious.')

Kelepir (2001) notes these facts concerning the ability of *hiç*-expressions to give rise to semantic negation in fragment answers and their inability to occur in NPI-licensing contexts other than negation, and discusses them in the context of whether they are NPIs (like *anybody*) or negative quantifiers (like *nobody*). She argues that the fact that these expressions do not induce double negation readings under negation (nor under multiple hiç-expressions; Kelepir 2001, p. 160) and the fact that they are licensed by *–sIz* 'without' are evidence that they are not negative quantifiers. She briefly considers and dismisses the

possibility that they are neg-words, based on the fact that *hiç*-expressions require licensing also in the subject position, unlike Romance-type neg-words (as in 19b). However, if Turkish is a Strict NC language, as we claim, this argument would be moot. We give below two further arguments based on a contrast between Turkish minimizers and *hiç*-expressions to substantiate our claim that the latter are not licensed on par with NPIs in the same language.

First, consider the syntactic contexts in which minimizer NPIs are licensed in Turkish. Unlike *hiç*-expressions, these expressions cannot yield negation and hence cannot appear in fragment answers (22). Also unlike *hiç*-expressions, they are fine in content questions and conditionals (23).

(22) A: Kim-inle toplantı yap-acak-tı-n?
Who-COM meeting do-FUT-PAST-2SG
'Who did you say you were meeting?'
B: *Bir Allah'ın kulu-yla.
one god-GEN servant-COM
'*With a soul.'

(23) a. Kim tatil-de bir Allah'ın kul-u-yla görüş-tü?
who holiday-LOC one god-GEN servant-POSS3SG-COM meet.up-PAST
'Who met a soul during the holidays?'
b. Bun-u bir Allah'ın kul-un-a söyle-r-se-n sen-in-le
this-ACC one god-GEN servant-DAT say-AOR-COND-2SG you-GEN-COM arkadaşlığ-ı
kes-er-im.
friendship-ACC stop-AOR-1SG
'If you tell a soul about this, I will stop being friends with you.'

Another difference between Turkish minimizer NPIs and neg-words is their ability to appear in non-negated *ne*...*ne*... 'neither nor' constructions, as exemplified in (24b). This is one of the very few documented constructions in Turkish that express negation without requiring the negative marker on the verb.[9] In failing to mark negation on the verb, the construction is similar to the English *neither*...*nor*... construction, both in meaning and structure (see Jeretič 2022; Gračanin-Yüksek 2023).

First, contrast the negated (24a) and non-negated (24b) *ne*...*ne*... constructions. The non-negated construction that we are interested in needs to carry focus (cf. Şener and İşsever 2003). We indicate this by underlining the rightmost word of the *ne*...*ne*... sequence where the resulting nuclear pitch accent falls (see 24b). In the negated construction in (24a), the nuclear pitch accent falls on the verbal complex, where the negative morpheme is found. In the non-negated construction in (24b), there is no negation on the verb, yet the interpretation is negative, as in (24a).

(24) a. Ne Emre ne Merve okul-a git-me-di.
NE Emre NE Merve school-DAT go-NEG-PAST
'Neither Emre nor Merve went to school.'
b. Ne Emre ne Merve okul-a git-ti.
NE Emre NE Merve school-DAT go-PAST
'Neither Emre nor Merve went to school.'

Negated *ne*...*ne*... constructions like in (24a) should straightforwardly provide a licensing context for negative dependencies due to the presence of the negative marker. This is indeed true for all negative dependents, including *hiç*-expressions (25).

(25) Ne Emre ne Merve hiçbir yer-e git-me-di.
NE Emre NE Merve n-one place-DAT go-NEG-PAST
'Neither Emre nor Merve went anywhere.'

The non-negated construction, however, has limited licensing powers. It can license minimizer NPIs, as in (26a).[10] *Hiç*-expressions, on the other hand, are not licensed by the non-negated *ne*...*ne*... construction (26b). This suggests, again, that *hiç*-expressions are genuine neg-words requiring the negative marker in the clausal spine.

(26) a. [(?)]Ne Emre ne Merve tek kuruş harca-dı.
NE Emre NE Merve single dime spend-PAST
'Neither Emre nor Merve spent a dime.'
b. *Ne Emre ne Merve hiç para harca-dı.
NE Emre NE Merve n-amount money spend-PAST
('Neither Emre nor Merve spent any money.')

All of this indicates that Turkish expressions with *hiç* are neg-words. Unlike other kinds of NPIs, they may appear without negation in fragment answers, yet they need to be licensed otherwise. And, again unlike other NPIs, they need to be licensed strictly by clausal negation. Other DE/NV contexts or the likes of the non-negated *ne…ne…* construction cannot license them.[11] This indicates that this dependency does not involve regular NPI licensing but rather NC (see Ladusaw 1992; Giannakidou 2000; Zeijlstra 2004, and others).

One point of discussion, though, concerns polar questions. We have noted that in Turkish and elsewhere, neg-words cannot appear in content questions. In many NC languages, they are also banned from polar questions. Japanese is such an example (see Giannakidou 2000 for more examples). Negation is required to license the neg-word *nani-mo* 'n-thing' (lit. *what-also*) in (27a). Content questions are not licensing environments (27b). Neither are polar questions (27c).

(27) a. Taroo-wa nani-mo mie*(-naka)-tta.
Taroo-TOP n-thing see-NEG-PAST
'Taroo didn't see anything.'
b. *Dare-ga nani-mo mi-mashi-ta-ka?
who-NOM n-thing see-HON-PAST-Q
('Who saw anything?')
c. *Taroo-wa nani-mo mi-mashi-ta-ka?
Taroo-TOP n-thing see-HON-PAST-Q
('Did Taroo see anything?') (Daiki Matsumoto, p.c.)

While we have seen that Turkish presents the same pattern as Japanese with respect to declaratives and content questions, the situation with polar questions is different. Polar questions constitute an NC context in Turkish (28a; also see Kelepir 2001). However, this is only true for a subset of polar question configurations. The focus-sensitive polar question clitic must be on the verbal complex to license NC. In other placements (indicated in triangular brackets), licensing is not possible (28b) (Kamali 2011).

(28) a. Hiçkimse yemek yap(-ma)-dı mı?
n-body dinner make-NEG-PAST PQ
'Did(n't) anyone make dinner?'
b. Hiçkimse <mi> yemek <mi> yap*(-ma)-dı?
n-body PQ dinner PQ make-NEG-PAST
('Did NOONE make dinner?')
('Did noone make DINNER?')

This begs the question as to why neg-words may appear in this particular polar question configuration. It is known from Non-strict NC languages (e.g., Spanish/Italian; Zeijlstra 2004) that neg-words may appear in polar questions, but this has not been reported for Strict NC languages. We leave this question open for further research (but see Kamali and Matsumoto Forthcoming, for a recent proposal).

2.4. The Domain of Negative Concord in Turkish

Before drawing a final conclusion, we would like to briefly investigate the locality of NC in Turkish. Long-distance licensing of NC is generally considered impossible (Giannakidou 2000; Zeijlstra 2004), but certain matrix predicates and their morphosyntactic associates have been shown to provide transparent domains (see, for example, Giannakidou

and Quer 1997). Turkish *hiç*-expressions, on the other hand, appear to be licensed across clause boundaries with a few exceptions.

Turkish uses a few strategies to embed clauses. The standard method is nominalization, where the embedded subject carries the genitive case instead of the nominative, and the predicate carries a nominalizing morpheme. The internal structure of the nominalization is not fully morphologically transparent, but possessive agreement inside and case marking outside the embedded clause clearly indicate that it is nominalized (29a). To see this, compare (29a) with root embedding in (29b), which is also grammatical under certain matrix predicates, potentially with an accusative-marked embedded subject.

(29) a. Biz kedi-nin su iç-tiğ-in-i san-ıyor-uz.
we cat-GEN water drink-NOMIN-POSS3SG-ACC think-PRES-1PL
'We think that the cat is drinking water.'

b. Biz kedi(-yi) su iç-iyor san-ıyor-uz.
we cat-ACC water drink-PRES think-PRES-1PL
'We think the cat is drinking water.'

It has been known since Kornfilt (1984) that some embedded clauses in Turkish are transparent to licensing by matrix negation, while others are opaque. Kelepir (2001) shows that the complement clauses of a set of verbs, including neg-raising verbs (30), perception verbs (31), and attitude verbs (32), are transparent to the long-distance licensing of *hiç*-expressions. However, factive verbs introduce opaque domains (33). The same holds for root embeddings (34).[12]

(30) Biz kedi-nin hiçbir şey iç-tiğ-in-i/-e
We cat-GEN n-one thing drink-NOMIN-POSS3SG-ACC/-DAT
san-m-ıyor-uz/inan-m-ıyor-uz.
think-NEG-PRES-1PL/believe-NEG-PRES-1PL
'We don't think/believe that the cat is drinking anything.'

(31) Biz kedi-nin hiçbir şey iç-tiğ-in-i
we cat-GEN n-one thing drink-NOMIN-POSS3SG-ACC
gör-me-di-k/duy-ma-dı-k.
see-NEG-PAST-1PL/hear-NEG-PAST-1PL
'We didn't see/hear the cat drink anything.'

(32) Biz kedi-nin hiçbir şey iç-me-sin-i
We cat-GEN n-one thing drink-NOMIN-POSS3SG-ACC
iste-m-iyor-uz/onayla-m-ıyor-uz.
want-NEG-PRES-1PL/approve-NEG-PRES-1PL
'We don't want the cat to drink anything.'
'We don't approve of the cat's drinking anything.'

(33) *Biz kedi-nin hiçbir şey iç-tiğ-in-i
we cat-GEN n-one thing drink-NOMIN-POSS3SG-ACC
öğren-me-di-k/bil-m-iyor-uz.
learn-NEG-PAST-1PL/know-NEG-PRES-1PL
'*We didn't find out that the cat was drinking anything.'
'*We don't know that the cat is drinking anything.'

(34) ?*Biz kedi(-yi) hiçbir şey iç-ti san-m-ıyor-uz.
We cat-ACC n-one thing drink-PAST think-NEG-PRES-1PL
'We don't think the cat drank anything.'

We may add that complement clauses of reportative verbs, which are neither neg-raising nor factive, are also transparent to NC.

(35) Biz kedi-nin hiçbir şey iç-tiğ-in-i
we cat-GEN n-one thing drink-NOMIN-POSS3SG-ACC
söyle-m-iyor-uz/iddia et-m-iyor-uz.
say-NEG-PRES-1PL/claim do-NEG-PRES-1PL
'We are not saying/claiming that the cat is drinking anything.'

Locality domains such as adjunct islands still create opaque domains for NC, though, for reasons not properly understood by us, in certain adjuncts *hiç*-items may appear. (36) provides two examples under the same adverbial clause with differing acceptability.

(36) a. *Ahmet hiçbir yer-e git-sin diye para kazan-m-ıyor-uz.
Ahmet n-one place-DAT go-OPT so.that money earn-NEG-PRES-1PL
('We do not earn Money so that Ahmet travels anywhere.')
b. Hiçkimse onayla-sın diye çalış-m-ıyor-uz.
n-body approve-OPT so.that work-NEG-PRES-1PL
'We aren't working so that anybody approves.'

This short review suggests that long-distance licensing of NC is the rule rather than the exception in Turkish. We leave it to future research to explore why this may be the case and what may connect factive domains, root embedding, and certain adverbial clauses in their inability to license long-distance NC.

2.5. Are Turkish Neg-Words Universals or Existentials?

One of the central questions in the domain of neg-words and NPIs concerns whether neg-words/NPIs are universals or indefinites/existentials. NPIs are widely considered to be existentials licensed under a licensing operator such as negation (starting with Ladusaw 1979). However, it is also possible that they are universals obligatorily outscoping negation. This possibility arises because it is normally impossible to tease apart the narrow scope existential constellation $\neg > \exists$ from the wide scope universal constellation $\forall > \neg$, as the two are truth-conditionally equivalent (37) (see Giannakidou 2000; Shimoyama 2011).

(37) Sue didn't meet anybody.
$\neg\exists$x.[Human(x) & Meet(s,x)]
$\forall$x.[Human(x) $\rightarrow\neg$Meet(s,x)]

In the domain of neg-words, Ladusaw (1992) and Zeijlstra (2004) assume the existential analysis, whereas Szabolcsi (1984) and Giannakidou (2000) make a case for the universal analysis. Shimoyama (2011) has argued that Japanese NPIs are universals, but as Shimoyama's primary data are argued to be neg-words by others (Watanabe 2004 a.o.), we assume her analysis to be applicable to neg-words.

Giannakidou (2000, 2006) proposes a set of diagnostics, such as modification by *almost/absolutely*, the inability to bind donkey-pronouns, and the absence of neg-words in predicate nominals, to distinguish universals from existentials. For instance, *I saw almost somebody* is strongly degraded, while *I saw almost everybody* is fine. Also, universals, unlike existentials, do not bind donkey anaphora: *The students that have {something$_i$/anything$_i$/ *nothing$_i$/*everything$_i$} to say should say it$_i$ now*. Similarly, universals cannot appear in predicate nominals, but existentials can: *Mary is {a/*every} doctor*. Then, she shows that neg-words in Greek pattern with universals like *every x* and not with existentials like *some x* in English in these respects, indicating that they must be universals.

Shimoyama (2011) introduces fixed scope quantificational elements into the picture to sidestep the equivalence illustrated in (37). Suppose Q^+ is a scope-taking element that outscopes negation. With such an element, only universal NPIs can give rise to the scope construal $\forall > Q^+ > \neg$, because this construal is not equivalent to any construal involving Q^+, $\neg$ and $\exists$. By contrast, with Q^-, a scope-taking element that takes scope below negation, only existential/indefinite NPIs can give rise to the scope construal $\neg > Q^- > \exists$, as it is not equivalent to any construal involving $\neg$, Q^- and $\forall$.

Shimoyama then tests the quantificational status of Japanese NPIs based on examples like (38). The adverb *hudan* 'usually' is a Q^+ adverb: it has to outscope negation. With the neg-word *dare-mo* in the subject position, we observe the decisive reading $\forall > Q^+ > \neg$, which indicates that the neg-word is a universal.[13] The reading $Q^+ > \neg > \exists$ (or the equivalent $Q^+ > \forall > \neg$) may be present as well, but this reading is uninformative exactly because it has existential and universal equivalents.

(38) Nihonzin gakusei-no dare-mo hudan(-wa)/taitei sankasi-nakat-ta.
Japanese student-GEN n-body usually-TOP/mostly participate-NEG-PAST
'For every Japanese student, it was usually the case that they did not participate.'

On the flipside, the construal $\neg > Q^- > \exists$ would constitute evidence for the existential analysis. To demonstrate the quantificational status of an NPI unequivocally, one must test this diagnostic reading too, this time with a Q^- adverb.

Now, we first check the quantificational status of Turkish *her*-expressions based on Giannakidou's diagnostics (Giannakidou 2000, 2006). Here, we apply two tests: modification with *almost* and the occurrence of predicate nominals. The test involving donkey anaphora cannot be applied to Turkish as these require relative clauses where neg-words are independently banned in Turkish. Other diagnostics by Giannakidou are more language-specific and only hold for Greek or are no longer theoretically up to date (in the case of diagnostics based on syntactic locality[14] or existential commitment[15]). The two diagnostics we apply below point in the direction of neg-words being universals:

(39) a. Hemen hemen hiçbir öğrenci ders-e gel-me-di.
almost n-one student class-DAT come-NEG-PAST
'Almost no student came to class.'
b. *Leyla hiçbir doktor değil.
Leyla n-one doctor not
('Leyla is no doctor.')

As seen, in Turkish, the neg-word may be modified by *almost* and may not appear in a predicate nominal. These are universal-like characteristics: *every* can also be modified by *almost* and cannot appear in a predicate nominal, whereas the facts are reversed for the existential *some*. Hence, these data would suggest that Turkish neg-words are universals.[16]

Next, let us look at Shimoyama's diagnostics. Turkish and Japanese share important morphosyntactic features such as SOV constituent order and wh-in-situ, in addition to being Strict NC languages. In the context of this discussion, a particularly relevant parallelism is the relative scope between the subject position and negation. In Korean and partly also Japanese, the subject position is typically interpreted outside of the scope of negation (Shimoyama 2011). Turkish has this feature as well. Consider (40). If we have a class of ten students and three of them skipped class, this sentence can be truthfully uttered, indicating that the subject outscopes negation. In the reading where the subject takes scope under negation, seven to ten students are said to have skipped class, where (40) would not be a true statement.[17]

(40) Üç veya daha fazla öğrenci ders-e gel-me-di.
three or more many student class-DAT come-NEG-PAST
'For three or more students, they did not come to class.' 3 or more > ¬
??'It is not the case that three or more students came to class.' ??¬ > 3 or more

According to Shimoyama, if the subject position typically outscopes negation, there is reason to suspect that a subject neg-word may be outscoping negation as well. Structures with a neg-word subject should then potentially yield a reading with a universal outscoping negation ($\forall > \neg$), as Shimoyama claims to be the case in Japanese, and not a reading with an existential under the scope of negation ($\neg > \exists$).

Let us then see what Shimoyama's tests for neg-words reveal for Turkish *hiç*-expressions. Turkish also has quantificational adverbs with a preferred Q^+ ($Q > \neg$) reading such as *çoğu*

zaman 'mostly', just like the Japanese *hudan*. The reading where the adverb scopes under negation requires untypical prosody if at all possible (see Note 17).

(41) Ahmet çoğu zaman bisiklet-e bin-m-iyor.
Ahmet most times bicycle-DAT ride-NEG-PRES
'Ahmet doesn't ride a bike most of the time.' mostly > ¬
??'It is not most of the time that Ahmet rides a bike.' ??¬ > mostly

In the Japanese examples considered by Shimoyama, the negative element in the subject position scopes over the quantificational adverb, hence automatically over the negation that the adverb scopes over, leading to the ∀ > Q^+ > ¬ reading that provides evidence for the high scope universal analysis.

In Turkish, we do not find this to be the case. (42), which now has a neg-word subject, is marginally acceptable to begin with, and in the allowed prosody (to the extent that it could be controlled), the critical ∀ > Q > ¬ reading is absent.[18]

(42) ??Hiçbir komşu-m çoğu zaman bisiklet-e bin-m-iyor.
n-one neighbor-POSS1SG most times bicycle-DAT ride-NEG-PRES
??'No neighbor of mine rides a bike most of the time.' ??¬ > ∃ > Q
Not: 'For all my neighbors, most of the time they do not ride a bike.' *∀ > Q > ¬

On the flipside, an adverb that supports a Q^- (¬ > Q) reading can provide evidence for the narrow scope existential analysis by providing (or failing to provide) the decisive construal ¬ > Q > ∃. One such adverb in Turkish is *çok* 'much'.

(43) Ahmet çok ye-me-di.
Ahmet much eat-NEG-PAST
'Ahmet didn't eat much.' ¬ > Q
??'There is much Ahmet didn't eat.' ??Q > ¬

Now, with a neg-word subject, if we get a ¬ > Q^- > ∃ construal, then we can safely conclude that the neg-word has an existential interpretation. As shown in (44), this reading is indeed available (in addition to the non-decisive ¬ > ∃ > Q^-).

(44) Hiçkimse çok ye-me-di.
N-body much eat-NEG-PAST
?'It's not much that was eaten.' ¬ > Q > ∃

So, based on Shimoyama's tests, scope-sensitive quantificational adverbs in Turkish provide evidence for the existential analysis and not for the universal analysis: they do not allow the ∀ > Q > ¬ reading (with Q^+ elements) that would be evidence for the universal analysis. In fact, they allow the ¬ > Q > ∃ reading (with Q^- elements), which is evidence for the existential analysis.

Let us also test this with modals. Just like adverbials, modals can be employed as the disambiguating Q element in these tests. As we will see in detail in Section 4, this is a particularly clear test because Turkish modals always take fixed scope with respect to negation, leading to unambiguous scope construals. Below, what we gloss as *abil1* is a Q^- element, as it has to scope below negation (45a). *Abil2*, on the other hand, has to scope above negation (45b).[19]

(45) a. Dans ed-e-me-z-sin.
dance do-ABIL1-NEG-AOR-2SG
'You may not dance.' ¬ > ◊/*◊ > ¬
b. Dans et-me-yebil-ir-sin.
dance do-NEG-ABIL2-AOR-2SG
'You are allowed not to dance.' ◊ > ¬/*¬ > ◊

Now, let us take the two instances of existential modal in (45a–b) for our test. If the Q^- modal leads to a ¬ > ◊ > ∃ reading with a neg-word subject, this is evidence for a narrow scope existential analysis of the neg-word. Indeed, we do find this evidence. This sentence

is ambiguous between a total prohibition and an individual prohibition reading, the first of which exemplifies the diagnostic configuration.

(46) Hiçkimse dans ed-e-me-z.
n-body dance do-ABIL1-NEG-AOR-2SG
'Nobody may dance.' $\neg > \Diamond > \exists$
?'There is no particular individual who may dance. (Mary because her knee is injured, John because he is grounded, etc.)' $?\neg > \exists > \Diamond = \forall > \neg > \Diamond$

If, on the other hand, the Q^+ modal *abil2* leads to a $\forall > \Diamond > \neg$ reading with a neg-word subject, this would be evidence for a wide scope universal analysis of the neg-word. However, this reading is marginal if at all acceptable. The sentence has the total permission reading, and not a reading where for each individual there is separate permission granted not to dance.

(47) Hiçkimse dans et-me-yebil-ir.
n-body dance do-NEG-ABIL2-AOR-2SG
'It is permitted that nobody dances.' $\Diamond > \forall > \neg = \Diamond > \neg > \exists$
??'Each is individually permitted not to dance.' $??\forall > \Diamond > \neg$

Hence, the data on modals and quantificational adverbs converge. Shimoyama's wide scope universal analysis of Japanese negative elements is not tenable for Turkish neg-words. According to these tests, Turkish neg-words behave like existentials.

At this stage, the results are conflicting. Giannakidou's diagnostics point in the direction of Turkish *hiç*-expressions being universals; Shimoyama's, in the direction of existentials. We can therefore not draw a safe conclusion here, though Penka (2011) and Gajić (2016) have argued that some of Giannakidou's diagnostics for a universal analysis, for instance, *almost*-modification, are also possible in languages where neg-words are clearly existential (e.g., Italian or Bosnian-Serbian-Croatian), casting doubt on the validity of this test.

2.6. Summing Up

To sum up, we have argued that *hiç*-expressions in Turkish are neg-words and are licensed strictly under NC. They are thus separated from minimizer NPIs, which have a broader distribution. The domain of NC includes complex clauses with a non-factive matrix predicate and polar questions with verbal attachment of the question clitic, both of which point to points of variation deserving further investigation. In terms of their meaning, unlike the comparable class of negative elements in Japanese, Turkish neg-words do not present any evidence for Shimoyama's (2011) analysis of these elements as wide scope universals but violate some of the diagnostics for existentials by Giannakidou (2000, 2006) as well.

3. Narrow Scope Universals and the Non-Entailment-of-Non-Existence Condition

The second negative dependency we inspect on the basis of data from Turkish is a crosslinguistically relatively uncommon negative dependency: universals that take obligatory narrow scope with respect to negation.

3.1. Turkish Universals and Negation

Turkish has three forms denoting universal quantification over individuals: *bütün/tüm* (the two are fully equivalent), *her*, and *hep-*. All of these forms can occur in affirmative sentences; hence, they are not NPIs (or neg-words) in the standard sense, but neither of them can outscope negation in negative clauses (see Kelepir 2001; Öztürk 2005; Özyıldız 2017 a.o.). (48–50) exemplify these forms in affirmative and negative sentences. The (a) examples show that they are fine without negation. The (b) examples illustrate that in the presence of negation, the interpretation is one of partial negation and not total negation, that is, the universals scope below negation.[20]

(48) a. Her ögrenci gel-ir.
every student come-AOR
'Every student comes.'
b. Her ögrenci gel-me-z.
every student come-NEG-AOR
'Not every student comes.'
Not: 'No student comes.' ¬ > ∀; *∀ > ¬

(49) a. Bütün/tüm ögrenci-ler gel-ir.
all student-PL come-AOR
'All students come.'
b. Bütün/tüm ögrenci-ler gel-me-z.
all student-PL come-NEG-AOR
'Not all students come.'
Not: 'No student comes.' ¬ > ∀; *∀ > ¬

(50) a. Hep-si gel-ir.
all-POSS3SG come-AOR
'All of them come.'
b. Hep-si gel-me-z.
all-POSS3SG come-NEG-AOR
'Not all of them come.'
Not: 'None of them comes.' ¬ > ∀; *∀ > ¬

In the rest of this section, we focus on *her* (48). Combining with singular nominals and not requiring a possessive construction, this form is morphologically simpler and hence more akin to English *every*. Also, *her* is noted to be rather distributive, unlike *bütün* (Kelepir 2001; Özyıldız 2017). This feature of *her* makes for a particularly compelling illustration of the narrow scope requirement of Turkish universals with respect to negation, as its default tendency is outscoping rather than underscoping other quantificational elements.

What could be the source of this rare scope requirement of the universals in Turkish? To our knowledge, neither universals nor negation are restricted in their scope potential on their own in Turkish, so this requirement is observed only when universals and negation occur together. Turkish is generally taken to be scope-rigid; hence, universal subjects can and do scope over object quantifiers (Zidani-Eroğlu 1997; Kelepir 2001; Özyıldız 2017; Demirok 2021 a.o.). Also, with respect to modals, which are verbal suffixes like negation, universal subjects may take ambiguous scope (51).

(51) Her öğrenci maç-ı izle-yebil-ir.
every student game-ACC watch-ABIL-AOR
'Every student may watch the game.'
i. ◇ > ∀: It is permitted that the entire student population watches the game (hence classes are canceled).
ii. ∀ > ◇: Each student is individually permitted to watch the game (e.g., by their parents. Classes take place as usual).

The scope of negation is similarly flexible. Most notably, negation may scope over or below quantifiers such as *many* and numerals in the subject position (52). Unlike with universals, these structures even present a slight dispreference for the narrow scope reading (which improves under the compressed prosody mentioned in Note 17).

(52) Birçok/birkaç/beş öğrenci gel-me-di.
many/a few/five student come-NEG-PAST
'Many/a few/five students did not come.'
iii. Many/a few/five > ¬: Many/a few/five students are such that they did not come.
iv. ¬ > many/a few/five: It is not the case that many/a few/five students came.

A potential explanation for such restricted scope behavior is polarity sensitivity. Indeed, Turkish universals are a bit like NPIs: they scope below negation in the presence of negation. However, the similarity ends there, as these elements are not *licensed* by

negation. On the other hand, another class of familiar polarity-sensitive elements, Positive Polarity Items, act similar to Turkish universals: they must scope in a certain way alongside negation, but their presence does not hinge on the presence of negation. We illustrate this in (53) with English *some* as well as Turkish *bazı*, shown to be a PPI by Kelepir (2001).

(53) a. Bazı öğrenci-ler gel-di.
some student-PL come-PAST
'Some students came.' ∃ > ¬; *¬ > ∃

b. Bazı öğrenci-ler gel-me-di.
some student-PL come-NEG-PAST
'Some students are such that they did not come.'
Not: 'There are no students who came.' ∃ > ¬; *¬ > ∃

English PPIs outscope negation in most contexts (Szabolcsi 2004), which is also the case with the Turkish PPI *bazı* 'some' (Kelepir 2001) (53b). The universals we are dealing with must scope *below* negation. However, in both cases, the resulting interpretation cannot be one of total negation. In combination with restricted scope with respect to negation while not requiring it, one might say that Turkish universals act as the mirror image of standard PPIs of English.

We will outline an account below following this lead. We propose addressing the narrow scope behavior of Turkish universals in terms of polarity sensitivity and connecting these NPI-like and PPI-like characteristics under one principle. In this account, the obligatory narrow scope of Turkish universals points to a novel kind of negative dependency. The source of this polarity sensitivity is a referentiality requirement that essentially bans readings with total negation. It affects existentials and universals alike, turning the former into PPIs and the latter into Turkish-type non-standard NPIs. In this way, the unusual scope behavior of Turkish universals not only receives an explanation but also possibly provides an important missing piece of the puzzle of types of polarity sensitivity.

3.2. The Non-Entailment-of-Non-Existence Condition

We take as a starting point a prominent analysis of NPIs that are licensed in all NV contexts ("broad NPIs" according to Giannakidou 2006, "superweak NPIs" according to Zeijlstra 2022). Unlike a weak NPI such as English *any*, superweak NPIs are grammatical in all non-veridical contexts, including modal contexts. An example of such an NPI is Mandarin *shenme* 'what, any', which is licensed under certain modals (54a) and negation (54b) (cf. Lin 1998 for more discussion and examples).

(54) a. Mali zuotian *(haoxiang) mai-le shenme shu.
Mary yesterday probably bought-perf what book
'Mary has probably bought a book yesterday.'

b. Mali zuotian *(mei) mai shenme shu.
Mary yesterday neg bought what book
'Mary didn't buy any book yesterday.' (Lin 1998)

Lin's (1996, 1998) explanation for the source of this kind of NPI-hood is the lexically encoded *Non-Entailment-of-Existence Condition (NEEC)*, similar to what Giannakidou (2011) dubs referential deficiency. In this framework, certain elements may not appear in contexts that would entail the existence of a referent satisfying their description, where such contexts are formed by the proposition whose widest scope operator is a scope operator that the NPI is in the scope of. This means the sentences in (54) with the modal or negation are fine because the existence of a book bought yesterday by Mary is not entailed. If the modal or negation is absent, the sentence becomes ungrammatical, as the sentence would then entail that there is a book bought yesterday by Mary, which violates NEEC.

In the same vein, Giannakidou (1998, 2011) argues that NPIs sensitive to non-veridicality (i.e., NPIs that, unlike *any* or *ever*, are licensed by all NV operators, not just by DE ones) are NPIs because they are referentially deficient in the sense that they cannot give rise to an existentiality entailment.

As a next step, we would like to argue that the reverse of Lin's *Non-Entailment-of-Existence Condition*, a lexically encoded condition we dub the *Non-Entailment-of-Non-Existence Condition (NENEC)*, also has grammatical reality. Elements sensitive to NENEC should not appear in contexts that would entail the *non-existence* of referents satisfying their description, where such contexts are formed by the proposition whose widest scope operator is a scope operator that they are in the scope of. An element sensitive to NENEC would thus display polarity sensitivity that bans it from contexts where its non-existence is entailed.

English-type PPIs, we would argue, are prime examples of NENEC-sensitive elements. Empirically, an expression like the English existential *some* is a PPI because it must scope over negation (e.g., *nobody*) and not under it. Hence, (55) means 'there is a book that nobody read', not 'nobody read a (certain) book'.

(55) Nobody read some book. $\exists >$ nobody; *nobody $> \exists$

Under NENEC, the reason that (55) does not allow a reading with a scope construal *nobody>some* is that its assertion under this scope construal would entail that there is no book read by anybody ($\neg > \exists$). This violates NENEC, which forbids negating the existence of such books. When the scope construal is reversed ($\exists > \neg$), it is asserted that there is a book read by nobody, which no longer violates NENEC. Thus, PPIs like *some* cannot take scope below elements that negate the existential import they can make. Hence, these PPIs are predicted to be banned under negation and negative quantifiers like *nobody*, i.e., they are banned in anti-additive contexts.

In this line of thinking, we would expect existential PPIs to scope freely under or over DE elements that are not anti-additive or anti-veridical, because these block the existential import in neither construal. In (56), under both construals, there can be books read by few or at most three students: either there are few/at most three students who read some book (few/at most $3 > \exists$;), or some book is read by few/at most three students ($\exists >$ few/at most three).[21] In neither case is the non-existence of such books entailed. In fact, the presence of such students/books is inferred.

(56) a. Few students read some book. few $> \exists$; $\exists >$ few
b. At most three students read some book. at most $3 > \exists$; $\exists >$ at most 3

Thus, under NENEC, English-type existential PPIs are predicted to be so-called weak PPIs: PPIs that are only anti-licensed under anti-additivity and not under other downward-entailing contexts, a prediction that, to the best of our knowledge, is borne out. This makes NENEC a viable source of polarity sensitivity, which we, in turn, use to approach the peculiar behavior of Turkish universals.

3.3. Turkish Universals as Universal NPIs Mirroring PPIs

To see how NENEC applies to Turkish, let us first look at PPIs like *bazı* 'some'. We have already seen in (53) that *bazı* is a PPI, so it may be hypothesized that *bazı* is subject to NENEC: staying under negation would entail the non-existence of referents satisfying its description (students who came), so it has to scope above negation.

PPIs subject to NENEC should only be sensitive to negation, as only negation leads to the offending non-existence entailment; hence, they must be weak PPIs like the English *some*. Let us see if *bazı* is a weak PPI. We test this with the non-anti-additive elements exemplified in (56). We use a dative-assigning verb to stay clear of the widely discussed added semantic effects of overt accusative on our object with *bazı* (Enç 1991 among many others), but plural marking is inescapable.

(57) a. Birkaç/az sayıda öğrenci bazı sınav-lar-a gir-di.[22]
a.few few in.number student some exam-PL-DAT enter-PAST
'Few students took some exams.' few > ∃; ∃ > few

b. En fazla üç öğrenci bazı sınav-lar-a gir-di.
most many three student some exam-PL-DAT enter-PAST
'At most three students took some exams.' at most 3 > ∃; ∃ > at most 3

In both (57a) and (57b) in Turkish, we see a scope ambiguity similar to English. These sentences may both mean that few/at most three students took a number of exams (few/at most 3 > ∃), or that certain exams were taken (only) by few/at most three students (∃ > few/at most 3).[23] The presence of the first reading, where *bazı* scopes under *few/at most n* (while being unable to scope under negation), suggests that *bazı* is a weak PPI whose polarity sensitivity can be accounted for by NENEC.

English *some* and Turkish *bazı* are, as widely assumed for all PPIs, existentials. Hence, if the PPI is under negation, we get a ¬ > ∃ constellation which leads to a non-existence entailment. What if the polarity item were a universal? If that were the case, the ∀ > ¬ reading, which means total negation, would cause a non-existence entailment. If this polarity item were subject to NENEC, it would then be forced to take scope *under* negation in the partial negation constellation ¬ > ∀. This would make that item an NPI (scoping under negation) with no requirements to occur with negation. Could a universal be an NPI? Polarity items have, until recently, been assumed to consist of existentials only, but this assumption is challenged by Iatridou and Zeijlstra (2013) and Zeijlstra (2017), who argue for universal PPIs in the domain of modals and individuals, respectively. So, such a universal NPI subject to NENEC is possible to imagine.

As the keen reader can see, we propose that Turkish universals are exactly those universal NPIs subject to NENEC. Take (48)–(50) again. Under the surface reading ∀ > ¬, it would be entailed that there are no students that came, which violates NENEC. The inverse scope reading ¬ > ∀, where not all students came, does not violate NENEC, and hence is the only available reading. For this reason, Turkish universal quantifiers display a novel type of negative dependency. Just like weak PPIs, they are subject to NENEC, and therefore must scope under negation when negation is present. If negation is absent, NENEC is trivially satisfied. No negative existential commitment is made when somebody utters that all students came.[24]

As expected under this account, just like their existential PPI counterparts, Turkish universals are only sensitive to anti-additivity. When they appear above a non-anti-additive downward-entailing operator, a surface scope reading should be available, and indeed it is:

(58) Her öğrenci birkaç/az sayıda sınav-a gir-di.
every student a.few/few in.number exam-DAT enter-PAST
'Every student took few exams.' ∀ > few

Further evidence comes from overt accusative case on direct objects with a universal. It is a well-known fact in Turkish that overt accusative case is obligatory on direct objects that are specific nominals, such as proper names and demonstratives (Enç 1991). Mysteriously, the same holds for direct objects with universal quantifiers (59), even though they do not show the same discourse saliency as other accusative-requiring nominals.

(59) Selma her öğrenci*(-yi) gör-dü.
Selma every student-ACC see-PAST
'Selma saw every student.'

Our proposal is in line with this specificity-like behavior of universals. Given that specificity requires an existential commitment, it is not surprising that universal quantifiers that are subject to NENEC pattern with proper names and demonstratives.

3.4. On the Syntactic Source of Narrow Scope Universals

Before closing this section, we would like to briefly discuss how the narrow scope behavior of Turkish universals may be represented in the syntax. Do they occupy a position under negation in surface syntax, or do they reconstruct? How are they different from other subjects in this respect?

It has been observed, at least since Kornfilt (1984), that subjects in Turkish may show characteristics in line with a syntactic position lower than the canonical subject position in Spec, TP. For Öztürk (2005), whose analysis is partly motivated by narrow scope universals, subjects stay inside vP unless they are optionally raised, such as in cases of topicalization. Hence, data like (60) receive a simple explanation.

(60) a. Her öğrenci sıklıkla depresyona gir-er.
Every student frequently depression enter-AOR
'Every student becomes depressed frequently.'
b. Sıklıkla her öğrenci depresyona gir-er.
Frequently depression enter-AOR
'Frequently every student becomes depressed.'

In (60), the frequency adverb *sıklıkla* 'frequently' can either precede or follow the universal subject and take scope accordingly. If subjects were always placed in Spec, TP, one would expect this adverb to always follow the subject or exhibit some markedness when it precedes the subject, contrary to fact. Furthermore, according to Şener (2010), Japanese-style scrambling also cannot be an option to derive the two surface orders with accompanying scope construals. If subjects typically stay in vP in Turkish, then the narrow scope of the universals would be accounted for.

A second option is to assume that the subject raises to TP but reconstructs to vP at LF. Reconstruction lends itself well to phenomena involving an ambiguity between surface and inverse scope. In such an account, if an element only has a scope reading associated with its higher surface position, this would mean that the item may not reconstruct. This would be the case for PPIs. If an element only has a reading associated with its low base position, then this would indicate that this item must obligatorily reconstruct. Items for which two scope construals are available are said to be free to reconstruct. In this way, a uniform syntactic mechanism may be used to address various scope behaviors. Additionally, one may argue that a semantic constraint such as NENEC must be accessible at LF once all narrow syntactic computation is completed, rather than at first merge. It has been argued, in particular, that the violation of polarity sensitivity requirements makes LF target lower copies (i.e., leads to reconstruction) (Iatridou and Zeijlstra 2013). Moreover, reconstruction would be in line with the generally accepted relationship between case and agreement, both of which Turkish marks overtly and involves the canonical subject position in Spec, TP (cf. Baker 2008; though see Preminger 2011 for an exception in Basque).[25]

In this section, we have mainly focused on *why* Turkish universals scope below negation and not *how*. As far as the facts of scope-taking are concerned, both accounts could, in principle, be adopted: to be interpreted under negation, the universal subject could be staying in vP or reconstructing to vP. However, let us note that data indicating variable scoping from the subject position, such as (40), (51), and (52), are more in line with the reconstruction approach, as they reveal that both vP and TP are positions where the subject quantifier may take scope. Moreover, we have noted for these cases that the preferred reading is one where the quantifier takes scope over negation, which would mean that under approaches like Öztürk's, some quantifiers must routinely topicalize, begging the question why.

3.5. Summing Up

In this section, we have demonstrated that Turkish universals must scope below negation, unlike other quantifiers, which constitutes a case of non-standard NPI-hood. We have argued that once it is assumed that universals, like Turkish *her*, as well as existential PPIs,

such as English *some* and Turkish *bazı*, are subject to the *Non-Entailment-of-Non-Existence Condition* we are proposing, their scope behavior is readily accounted for. Hence, such universals show an NPI-like scope construal with respect to negation without requiring negation. This approach not only uncovers a seemingly rare kind of negative dependency of universal quantifiers but, if the account sketched is on the right track, also points to a parallelism between such universals and existential PPIs as mirror images of one another.

4. Modal Morphemes and Polarity Sensitivity

The third and last instance of negative dependency we will consider, based on Turkish, is an apparent dependency that holds between negation and modals where certain modals are interpreted over negation and some under it. On the face of it, obligatory scope-taking with respect to negation may be a case of polarity sensitivity in the domain of modals, as Iatridou and Zeijlstra (2010, 2013) argue.

4.1. The Verbal Complex in Turkish: Modals and Negation

In agglutinative Turkish, negation and tense-aspect-modality (TAM) morphemes are verbal suffixes. The head-final verbal morphological complex, based on a single verb stem, may include as many as four TAM suffixes (see Kornfilt 1996; Kelepir 2001 for syntactic underpinnings). (61) exemplifies a rich verbal complex with negation and three modal expressions, as well as additional tense.

(61) Oya ekran-ı gör-e-me-yebil-meli-y-di.
Oya screen-ACC see-ABIL1-NEG-ABIL2-NEC-COP-PAST
'Oya should have had permission not to be able to see the screen.'

As the translation suggests, all TAM suffixes are ordered in a way that reflects their scope: an outer (rightward) position means higher scope (Kelepir 2001 and references therein, Cinque 2001 for a cartographic proposal; but see Göksel 1997 for arguments against such a view). The negative morpheme *–mA* itself occupies a strict slot, where it is lower than all TAM positions but one. As seen in (61), three slots in the verbal complex are available to modality. Indeed, all three modal positions take scope in line with their linear order, as we briefly saw in Section 2.5.

Zooming in on modals, we see in (62) that the universal modal, the necessitative *–mAlI*, is outside of and outscopes the existential modal, the abilitative *–Abil*.[26]

(62) Oya gör-ebil-meli.
Oya see-ABIL-NEC
'Oya must be able to see.' $\Box > \Diamond; *\Diamond > \Box$

This scope rigidity persists in interactions with negation. The universal modal appears in a slot outside of the negative morpheme and takes scope over it.[27]

(63) gör-me-meli
see-NEG-NEC
'must not see' $\Box > \neg; *\neg > \Box$

For existential modality, there are two slots: to the left of negation, we see the suffix *–A*, and to the right of negation, we see *–Abil*. In both cases, scope continues to follow the linear order of the suffixes (64). We gloss these as *abil1* and *abil2*, respectively, to highlight their position with respect to negation. Note that the negation of ability reading of *–A* in (64a) is familiar, but the 'permission not to' ($\Diamond > \neg$) reading realized by *–Abil* in (64b) cannot be expressed with the existential modals in more widely studied languages, such as English *may* and *can* (unless a particular prosody is employed; see Iatridou and Zeijlstra 2013).

(64) a. gör-e-me-z
see-ABIL1-NEG-AOR
'may not see' ¬ > ◊; *◊ > ¬
b. gör-me-yebil-ir
see-NEG-ABIL2-AOR
'is allowed not to see' ◊ > ¬; *¬ > ◊

As (63) and (64b) show, the universal modal *–mAlI* and the existential modal *–Abil* obligatorily scope over negation. This could potentially indicate that they are PPIs. Moreover, the existential *–Abil* scoping over negation instantiates a typologically uncommon pattern according to Iatridou and Zeijlstra (2010). Hence, we ask in this section if these Turkish modals are PPIs.

Conversely, the existential modal *–A* not only obligatorily takes scope below negation but also requires the presence of negation, creating a poorly understood gap in the paradigm (65a). When expressing the non-negated existential modal, the only available form is *–Abil* (65b).

(65) a. *gör-e-r
see-ABIL1-AOR
('may see')
b. gör-ebil-ir
see-ABIL-AOR
'may see'

We will hence ask if *–A* is an NPI and what such an analysis would entail for this paradigmatic gap and for the polarity sensitivity of existentials crosslinguistically.

Before moving on, let us clarify a few assumptions we make. While the non-negated existential form in (65b) appears to be identical to our abil2, its semantic import is that of abil1.[28] This discrepancy creates the illusion that *–A* "turns into" *–Abil*, but the two forms are not related morphophonologically (at least in the synchronic grammar). We will address this issue under a simple proposal in this section. We start by making the straightforward assumption of two distinct modal morphemes representing these two distinct surface forms. To keep things simple, we will gloss an existential modal appearing without negation simply as "abil".

Secondly, as (63) and (64b) show, the universal *–mAlI* and the existential *–Abil* obligatorily scope over negation. Regarding existential modals, it has been suggested that those with a deontic flavor (denoting permission) rarely (if ever) take high scope, but epistemic existential modals (denoting possibility) straightforwardly outscope other elements (Iatridou and Zeijlstra 2010; Zeijlstra 2022). All three Turkish modals we are addressing, including the uncommon high scope existential *–Abil*, have deontic readings (66). We hence base our observations on deontic readings where relevant, and use deontically flavored translations such as *be allowed* to reflect that.

(66) Ayakkabı-lar-ın-ı çıkar(-ma)-yabil-ir-sin.
shoe-PL-POSS2SG-ACC take.off-NEG-ABIL(2)-AOR-2SG
'You are allowed (not) to take your shoes off.'

What is at the root of these scope interactions concerning the three Turkish modal morphemes and negation? As suggested in the literature, this behavior may follow from their position in the verbal complex and the underlying syntax. However, as we discussed, one could also consider the modals to be polarity-sensitive. The two approaches based on fixed morphosyntactic positions and polarity sensitivity are not mutually exclusive. Hence, we ask in this section if one can find traces of polarity sensitivity in the scope-sensitive behavior of Turkish modal suffixes.

4.2. Polarity-Sensitive Modals

As we have amply seen, a restriction to occur under negation could be an NPI characteristic. Iatridou and Zeijlstra (2013), following Van der Wouden (1994), argue that NPI modals do exist. Part of the reasoning is motivated by data like in (67), where some modals require the presence of negation and hence qualify as NPIs.

(67) Mary need*(n't) leave.

Other modals such as *must* and *may* take selective scope with respect to negation, as shown in (68). While *must* takes wide scope, (deontic) *may* takes narrow scope. However, there appears to be no reason for the English modals in (68a) and (68b) to take different scopes with respect to negation, while they syntactically appear in the same position in the surface form.

(68)	a.	Mary must not leave.	$\Box > \neg$
	b.	Mary may not leave.	$\neg > \Diamond$

To account for these facts, Iatridou and Zeijlstra (2013) argue that some modals, like English *must*, are PPIs, and hence have to outscope negation. Evidence for this claim comes from tests indicating the PPI status of universal modals in English, Dutch, and Greek. We illustrate below with English *must* for simplicity.

As we saw in Section 3, standard PPIs such as English *some* scope over negation in simple contexts. But as documented extensively by Szabolcsi (2004), certain contexts alleviate this requirement. While in (69a) *some girl* has to scope over negation (as in, there is some girl Mary didn't see), in (69b–d), *someone* can scope under negation (as in, it is not the case that John called someone). These rescue contexts are created by intervention (69b), and NPI-licensing contexts such as antecedents of conditionals (69c) and in combination with *only* (69d).[29]

(69)	a.	Mary didn't see some girl.	$\exists > \neg$;*$\neg > \exists$
	b.	John didn't call someone because he was lonely (but because he needed a lift).	$\neg >$ because $> \exists$
	c.	If we don't call someone, we are doomed.	if $[\neg > \exists]$
	d.	Only John didn't call someone.	only $> \neg > \exists$

Iatridou and Zeijlstra (2013) show that English universal modals that outscope negation like *must* do not only appear to be PPIs in simple contexts like (69a), but also show the same characteristic rescue effects in the environments in (69b–d). Below, the simple (70a) illustrates the typical high scope 'requirement not to' reading of the modal, whereas in (70c) and (70d), the reverse reading of 'not required' suddenly becomes available. In (70b), the reading is equivalent to 'it is not because he is handsome that she must marry him', where, again, necessity is not negated.

(70)	a.	Mary mustn't leave.	$\Box > \neg$;*$\neg > \Box$
	b.	She must not marry him because he is handsome but because he is smart.	$\neg >$ because $> \Box$
	c.	If he must not work tonight, he is allowed to go out with his girlfriend.	if $[\neg > \Box]$
	d.	Only John must not work tonight.	only $> \neg > \Box$

A further argument establishing the PPI-hood of universal modals in English is that various modals exhibit different strengths of polarity sensitivity just like PPIs in the nominal domain. While strong PPIs are banned from all DE contexts, weaker PPIs are banned only from anti-additive contexts (see Van der Wouden 1994). We see in this respect that *should* is a strong PPI whereas *must* is a weaker PPI, as *must* can scope over *at most n*.

(71)	a.	At most five boys must leave.	must > at most 5; at most 5 > must
	b.	At most five boys should leave.	should > at most 5; *at most 5 > should

Iatridou and Zeijlstra then propose a unified syntactic account of modals in English. All English modals merge as verbal heads and subsequently raise to the finite T where they are routinely realized. PPI modals do not normally reconstruct; therefore, they take surface scope over negation. Only in PPI rescue contexts do they reconstruct. In contrast, modals that are not PPIs, like *may*, occupy T in surface syntax but always reconstruct to their original position, hence scope below negation.

In English, Greek, and Spanish, there is an intriguing gap in the inventory of modals: while universal modals may be PPIs, existential modals are polarity-neutral in their deontic reading. This means that existentials always reconstruct to their base position. Another gap, which is less obvious due to the scarcity of NPI modals in general, like the universal *need* in (67), is the apparent absence of deontic existential modals that are NPIs. Iatridou and Zeijlstra (2010) observe these gaps and suggest that they are universal features of existential modals pending a systematic treatment.

4.3. Are Turkish Modal Morphemes Polarity-Sensitive?

In light of this discussion, let us see if the three Turkish modals can be taken to be polarity-sensitive. Recall that there are three forms of interest: the wide scope universal, the wide scope existential, and the narrow scope existential, none of which appear to take variable scope in normal circumstances.

The lower existential modal *–A* is a good candidate for an NPI modal because its presence hinges on the presence of negation, and it scopes below negation (64a). We know of no good reason to rule out this analysis. On the contrary, if it is true, it would provide an explanation for the paradigmatic gap we illustrated in (65). The morpheme *–A* is an NPI; hence, it cannot appear outside the scope of negation (65a). Thus, it can only be employed in ¬ > ◊ readings such as inability and prohibition (64a). *–Abil*, on the other hand, is the non-NPI existential modal. It is used to express existential modality outside the scope of negation: in affirmative sentences (65b) and scoping over negation (64b). However, when scoping over negation, the modal can only express readings of ability or permission to a negated prejacent (◊ > ¬), not a negation of ability (¬ > ◊) (cf. Note 28). To express this meaning, the modal *–A* has to be used. This is why it looks as if *–Abil* turns into *–A* when negated. The only remaining question is what stops *–Abil* from appearing under negation as well.

The existential *–Abil*, as well as the universal *–mAlI*, appear and scope above negation. This suggests that they may be PPIs. Moreover, if *–Abil* is a PPI, its failure to appear under negation would be explained, giving more credence to the suggestion we made in the previous paragraph about the existential modal paradigm. So, let us evaluate this possibility with tests of PPI-hood from Iatridou and Zeijlstra (2013).

We start with the universal *–mAlI* and test if the contexts given in (70) rescue the modal from its PPI-like scope restriction. Both the Turkish *–mAlI* and the English *must* are high scope universal modals, so they are maximally comparable.

However, the tests show that, unlike English *must*, the Turkish modal continues to express a requirement, outscoping negation (72). PPI rescue contexts do not have an effect on the scope construal. Based on this, *–mAlI* is not a PPI.

(72) a. Gülfer dans et-me-meli
Gülfer dance do-NEG-NEC
'Gülfer must not dance.' □ > ¬;*¬ > □

b. Bu aday-a kadın ol-duğ-u için oy
this canditate-DAT woman
be-NOMIN-POSS3SG because vote
ver-me-meli-sin. (Sicil-i sebebiyle
ver-meli-sin.)
give-NEG-NEC-2SG record-POSS3SG because.of
give-NEC-2SG

	'You must not to vote for this candidate because she is a woman. (You must do so because of her track record.)'	□ > ¬ > because[30]
c.	Bugün iş-e git-me-meli-y-se-n bir gün daha dinlen-ir-sin. today work-DAT go-NEG-NEC-COND-2SG one day more rest-AOR-2SG 'If you are required not to go to work today, you rest one more day.'	if [□ > ¬]
d.	Sadece Bilgen iş-e git-me-meli only Bilgen work-DAT go-NEG-NEC 'Only Bilgen is required not to go to work.'	only > □ > ¬; □ > ¬ > only

We do the same with the existential *–Abil* in (73). If the high scope behavior of *–Abil* is indicative of its PPI status, PPI rescue contexts should reverse its scope. Recall that English does not have an equivalent existential modal, so we rely on paraphrases.

(73) a.	Oya dans et-me-yebil-ir Oya dance do-NEG-ABIL2-AOR 'Oya is allowed not to dance.'	◊ > ¬;*¬ > ◊
b.	Bu aday-a kadın ol-duğ-u için oy this canditate-DAT woman be-NOMIN-POSS3SG because vote ver-me-yebil-ir-sin. (Ama sicil-i sebebiyle give-NEG-ABIL2-AOR-2SG but record-POSS3SG because.of ver-me-n-i bekle-r-im.) give-NOMIN-POSS2SG-ACC expect-AOR-1SG 'You are allowed not to vote for this candidate because she is a woman. (But I would expect you to do so because of her track record.)'	◊ > ¬ > because[31]
c.	Bugün iş-e git-me-yebil-ir-se-n bir gün daha today work-DAT go-NEG-ABIL2-AOR-COND-2SG one day more dinlen-ir-sin. rest-AOR-2SG 'If you are allowed not to go to work today, you rest one more day.'	if [◊ > ¬]
d.	Sadece Banu iş-e git-me-yebil-ir. only Banu work-DAT go-NEG-ABIL2-AOR 'Only Banu is allowed not to go to work.'	only > ◊ > ¬; ◊ > ¬ > only

The tests indicate that the modal retains its 'permission not to' reading throughout the set of examples and hence outscopes negation. The PPI rescue contexts do not change the interpretation into one where the modal scopes under negation, yielding prohibition readings. Hence, these tests suggest that *–Abil* is also not a PPI.

It is noted by Iatridou and Zeijlstra (2013) that strong PPIs resist the tests in (c) and (d). So, it is possible that *–Abil* and *–mAlI* are strong PPIs and hence these contexts do not reverse their scope. But in fact, these modals take flexible scope with respect to non-anti-additive DE operators:

(74)	En çok beş öğrenci git-{meli/ebil-ir} most many five student go-NEC/ABIL-AOR 'At most five students must/may go.'	modal > at most 5; at most 5 > modal

The proposition in this example would be true if the maximum number of students required/allowed to go is five, or when there are five specific students that are

required/allowed to go. This shows that *–Abil* and *–mAlI* cannot be strong PPIs. The diagnostics hence indicate that the two Turkish modals are polarity-insensitive.

So, where do we stand? *–Abil* and *–mAlI* are not PPI modals, but *–A* is a reasonable candidate for an NPI modal. Without evidence for PPI-hood, to yield the scope rigidity documented in Section 4.1, these modals must be taking surface scope without movement or reconstruction. In the next section, we propose a functional morphosyntax for Turkish that accounts for these findings. But before that, let us conclude the two leads we have opened regarding the existential modal paradigm and the typologically unexpected behavior of Turkish existential modals.

Regarding the paradigm, if *–Abil* were a PPI, then its distribution *vis-à-vis –A* would make perfect sense. While *–A* is restricted to scoping under negation, *-Abil* would be banned from the same environment. Since it is not a PPI, what stops *–Abil* from occurring under negation as an alternative form to *-A*? At this point, we can only speculate, but we believe the answer more likely lies with principles of lexical representation and learning of morphemes (also, see Note 35).

Regarding the typological rarity, let us first recap the findings: in Turkish, we observe both an NPI existential modal (*-A*) and a high scope existential modal (*-Abil*). These are clear counterexamples to Iatridou and Zeijlstra's (2010) suggestion regarding the universality of reconstruction of existentials. However, as we have just seen, *-Abil* is not a PPI, so our finding does not go against a stronger claim about the presence of PPI existentials or their reconstruction.

4.4. Scope and the Syntax of Modal Morphemes in Turkish

As we have seen, the scope of Turkish modals strictly follows their morpheme position. Now that we have ruled out PPI-hood for the two high scope forms, we propose that surface syntactic position is enough to account for the Turkish data. Unlike in English, where the unexpected scope relations among modals and negation motivate an analysis where some modals reconstruct while others do not, in Turkish, the scope between functional elements is fixed because there is no movement, hence no reconstruction, in the functional domain. Verbal modals remain low and verbal, while T is occupied not by movement but by merge. This results in a surface functional morphosyntax of modals spanning more positions than T.

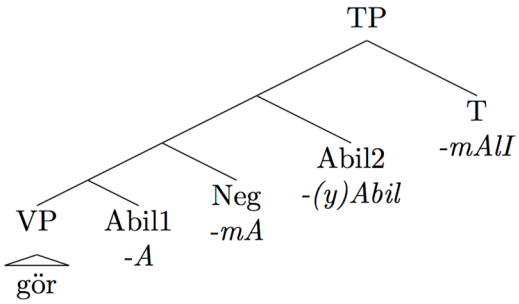
Our model is similar to proposals by Kornfilt (1996), Kelepir (2001), and Enç (2004) in that TAM morphemes and negation occupy fixed syntactic positions. We further argue that the entire array of scope relationships between modals and negation can be accounted for by the clausal structure. Following their positioning, *-mAlI* outscopes all other modals and negation; *-Abil* outscopes negation and *–A*; and negation outscopes *-A*. Hence, data like (61) and the verbal complex given in (75) are not only possible but also unambiguous. Fixed syntactic positions correctly predict that scope is rigid inside the verbal complex.

(75) gör-e-me-yebil-meli
see-ABIL1-NEG-ABIL2-NEC
'must be able to not be able to see'

As with previous syntactically based accounts of the phenomenon, we exploit the concatenative morphology of Turkish, which lends itself well to an analysis with TAM morphemes as syntactic heads. Negation and the three modals can indeed be easily modeled to occupy different positions in syntax. But what is the status of the T position, which is standardly assumed to be unique and finite? The second novelty we add to the understanding of the functional syntax of Turkish is a principled distinction between verbal TAM heads, of which there may be many, and a unique finite head position we equate with T.

On the basis of these considerations, we propose that the three modals and negation occupy the following positions in the clausal spine.

(76) (cf. 75)



In (76), our outermost and highest scoping modal *–mAlI* occupies the finite T position. In contrast, the existential modals *–A* and *–Abil* and the negative morpheme *–mA* are introduced in multiple verbal heads.[32] If *–mAlI* is in T, whereas existential modals are in verbal projections, we have an explanation for why all three may appear simultaneously and why *–mAlI* outscopes the existentials. Consider (77). To express 'a possibility of a requirement to see', which positions existential modality over the universal, *–mAlI* may not be employed; hence, (77a) is unattested. Instead, the periphrastic construction in (77b) is needed.[33] This follows if the finite *–mAlI* has to be in T, above the verbal *–Abil*.

(77) a. *gör-meli-yebil-ir
see-NEC-ABIL-AOR
('may need to see')
b. gör-me-si gerek-ebil-ir
see-NOMIN-POSS3SG be.needed-ABIL-AOR
'may need to see.' (lit. 'his seeing may be needed.')

As the analysis correctly predicts, among the four morphemes of interest, only the universal modal is obligatory in a finite verb form. However, the rest are not all free to appear, as we have noted with the NPI modal *–A*. As a last point of novelty, we posit *–A* to be a distinct modal merging in a distinct position. While *–A* was previously considered an idiosyncratic case due to its unclear affinity with *-Abil*, we explain its distribution by the morpheme's NPI status: *-A* requires the presence of negation and must merge under its scope. This is what rules out the unattested forms (78a), which lack negation, and (78b), where *–A* is above negation.

(78) a. *gör-e-yebil-ir
see-ABIL1-ABIL2-AOR
('may be able to see')
b. *gör-me-ye-yebil-ir
see-NEG-ABIL1-ABIL2-AOR
('may not be able to see')

A justification for the claim that the problem with (78a) is *–A*'s NPI status is the following: replacing *–A* with *–Abil*, which is not an NPI, considerably improves the acceptability (79).[34] Such data are infrequent, but there is a stark difference in acceptability between (79) and what we will shortly see with the universal modal in (89). If existential modals are verbal, such stacking facts are automatically captured.[35]

(79) ?gör-ebil-ebil-ir
see-ABIL1-ABIL2-AOR
'may be able to see'

We said that there is no movement in the functional morphosyntax of modals in Turkish. This means that the verbal existential modals cannot raise to T and assume finiteness. What happens, then, if one simply wants to state permission? We have seen

many cases of this throughout with the aorist morpheme, as in (79). Supporting our claim, T must be filled not by movement but by merge; hence, not by an existential modal, but by any finite TAM morpheme. (80) illustrates this with the future morpheme.

(80) a. gör-e-me-yebil-ecek
see-ABIL1-NEG-ABIL2-FUT
'will be able not to be able to see'

There are numerous ways to detect the verbal character of the existential modals based on the distribution of the verb + abil complex with or without negation. The same goes for the finite character of the universal modal. In the rest of this section, we will demonstrate these. We start with the verbal character of the existential modals.

First, the verb + abil complex not only requires a finite TAM morpheme to appear in a finite clause, but it also may not carry person marking (81a), which finite elements mandatorily carry (81b).

(81) a. *Sen uyu(-ya-ma)-yabil(-sin).
You sleep-ABIL1-NEG-ABIL2-2SG
'*You be able to (not be able to) sleep.'
b. Sen uyu(-ya-ma)-yabil-ecek*(-sin).
You sleep-ABIL1-NEG-ABIL2-FUT-2SG
'You will have the ability to (not be able to) sleep.'

Second, the verb + abil complex may carry nominalization morphemes (82a). These morphemes require a verbal base, as the grammatical (82b) with a verb stem and the ungrammatical (82c) with the future morpheme show.

(82) a. Sen-in uyu(-ya-ma)-yabil-me-n biz-i huzursuz ed-iyor.
you-gen sleep-ABIL1-NEG-ABIL2-NOMIN-2SG we-ACC uneasy do-PRES
'The fact that you may (not be able to) sleep makes us uneasy.'
(lit: your ability to (not be able to) sleep makes us uneasy)
b. sen-in uyu-ma-n
you-gen sleep-NOMIN-2SG
'The fact that you sleep' (lit: your sleeping)
c. *sen-in uyu-yacak-ma-n
you-gen sleep-FUT-NOMIN-2SG

Third, lacking a marker of finiteness, the existential modals may be coordinated with verb phrases and, for instance, express a command, at least for those speakers for whom ability modals can be used in commands in the first place.

(83) ?Sağlıklı beslen, spor yap, deliksiz uyu-yabil!
Healthy eat sports do holeless sleep-ABIL
'Eat healthy, exercise, be able to sleep through the night!'

A final indication that the verb + abil complex is verbal rather than finite is that a verb stem and the tenseless verb + abil complex behave similarly when they occur as the predicate of an adjunct clause headed by the complementizer *diye* 'because/so that'. While finite forms require the person suffix to be licensed under this complementizer and lead to a reason interpretation (84a), a verb stem or a verb + abil complex appears without person marking and leads to a purpose interpretation (84b).[36]

(84) a. Sen uyu-yor*(-sun) diye alçak ses-le konuş-uyor-uz.
you sleep-PRES-2SG because low voice-COM speak-PRES-1PL
'We are speaking quietly because you are sleeping.'
b. ?Sen uyu(-yabil)(*-sin) diye alçak ses-le konuş-uyor-uz.
you sleep- ABIL-2SG so.that low voice-COM speak-PRES-1PL
'We are speaking quietly so that you (can) sleep.'

If we apply these tests to the negative morpheme, which is found sandwiched between the two existential modals, we can confirm its expected verbal character. We have already seen the negative in (81) and (82a). (85) refashions (83) and (84b) for negation, showing that the verb + negation complex may be nominalized and combined with *diye* without person marking and under the purpose interpretation. The two existentials are free to occur alongside the negative in each case.

(85) a. Sağlıklı beslen, spor yap, sigara iç-me!
Healthy eat sports do cigarette smoke-NEG
'Eat healthy, exercise, don't smoke!'
b. Sen uyu-ma(*-sın) diye yüksek ses-le konuş-uyor-uz.
you sleep-NEG-2SG so.that high voice-COM speak-PRES-1PL
'We are speaking loudly so that you don't sleep.'

Thus, the existential modals and negation in Turkish are verbal. This allows for the possibility of multiple modals in one verbal complex, unlike English modals such as *may* or *can*, but rather like the periphrastic *be able*. Whether *–A* can appear is determined by the presence of negation, and when licensed, it has to merge lower than negation, because it is an NPI. *–Abil*, at least typically, merges higher.[37]

Moving on to the universal *–mAlI*, we see a very different morphosyntactic distribution. The crux of the difference is that the universal is a finite form. Therefore, it can form a complete finite sentence marked for person (86a), and it is required in a finite sentence (86b; with the null 3rd person singular marking to strengthen the point).

(86) a. Sen uyu-malı*(-sın).
you sleep-NEC-2SG
'You must sleep.'
b. Ali uyu*(-malı).
Ali sleep-NEC
('Ali *(must) sleep.')

Because the universal modal is finite, it may not serve as a base for nominalizations.

(87) *sen-in uyu-malı-ma-n
you-gen sleep-NEC-NOMIN-POSS2SG
('the fact that you must sleep/your having to sleep')

Similarly, a verb carrying this modal cannot be a command, nor can it be coordinated with verb phrases (88a). It may instead be coordinated with various finite elements (88b).

(88) a. *Sağlıklı beslen ve erken uyu-malı!
eat healthy and early sleep-NEC
'*Eat healthy and must sleep early!'
b. sağlıklı beslen-iyor, spor yap-acak, erken uyu-malı
healthy eat-PRES sports do-FUT early sleep-NEC
'is eating healthy, will exercise, must sleep early'

Finally, the universal modal can neither combine with another finite morpheme such as the future morpheme (89a) nor be stacked (89b).

(89) a. *Ali uyu-malı-yacak.
Ali sleep-NEC-FUT
('Ali will have to sleep.')
b. *Ali uyu-malı-malı
Ali sleep-NEC-NEC
('It is necessary that Ali must sleep.')

All of this shows that the universal modal *–mAlI* is not verbal but finite, and hence occupies the topmost T position, scoping over the verbal existential modals and negation.

In this sense, it is not unlike the English *must*, but there is no evidence that it merges as verbal and subsequently raises to T.

To recap, in Turkish, the three modal suffixes and negation are syntactic heads in fixed positions as in (76). The finite nature of the universal modal *–mAlI* ensures that it takes the highest scope by virtue of sitting in T. Its NPI status ensures that the existential modal *–A* is lowest in the structure as it has to scope under negation. Negation and *–Abil* are in the middle, and all three lower heads are verbal. The surface position of the morphemes reflects scope transparently because they do not move, hence do not reconstruct. This way, the scope relationships observed can be accounted for in their entirety. PPI-hood, for which we did not find evidence, is not at stake. We thus circle back to the syntactic understanding of Turkish TAM morphemes with a number of improvements: scope is rigid for a reason, there are verbal and finite TAM morphemes/positions with morphosyntactic reflexes, and the paradigm gap among the existential modal forms is a reflection of one form's NPI status.

An additional upshot of this analysis is that it presents a solution to the problem of morpheme competition for the finite slot in Turkish. In fact, all TAM morphemes in the language, except the ones we argue to be verbal (some eight of them) compete for a unique slot in the verbal morphology, which has not been given an account to our knowledge.[38] If this slot corresponds to the unique T position as we claim, this competition is predicted. We did not delve into this as we limited ourselves to the modals, but see the discussion of the finite status of *–mAlI* for some pointers.

4.5. Summing Up

We conclude our discussion of the behavior of Turkish modals with respect to negation as follows: Turkish modals that take scope over negation do not show PPI characteristics, but the one modal that takes scope below negation can indeed be analyzed as an NPI. The scope of modals relative to negation is not the result of polarity sensitivity as has been claimed for English, but a transparent reflection of the syntax of the clausal spine, where the three modals and negation appear in distinct fixed positions. This sets them apart from English modals, which, according to Iatridou and Zeijlstra (2010, 2013), show evidence of movement and reconstruction in their PPI-like behavior. An empirical offshoot of our findings is that deontic existential modals may be NPIs or scope over negation, which is not widely attested in European languages. Hence, Turkish clarifies the landscape of modal expressions by filling in these gaps. As this area of research is fairly new, it remains to be seen whether there may be a relationship between the presence of modal PPIs, movement in the functional syntax, and polarity-sensitive existential modals. The same goes for why languages may vary in these respects.

5. Conclusions

We have attempted to shed light on three cases of apparent negative dependency found in Turkish. With respect to nominal items that are licensed by negation like those with the morpheme *hiç*, we have proposed a stricter treatment as neg-words licensed under negative concord rather than as NPIs, made observations about the syntactic locality of NC in Turkish, and discussed their quantificational status. With respect to universals like *her*, we have described their unexpected narrow scope with respect to negation without requiring the presence of negation. This is an NPI-like characteristic, but certainly not of a standard NPI, which requires negation for licensing. We sketched an account that derives this behavior in parallel fashion with their mirror-image PPIs as a result of a restriction that bans them from environments where their non-existence is entailed. The final apparent polarity sensitivity, we argued, is partly only apparent. With the exception of a typologically rare existential NPI modal, Turkish modals take scope with respect to negation and to one another not because of a polarity-sensitive dependency, but because of the fixed positions they occupy in the clausal spine.

Our excursion has broadened the understanding of strict negative concord, especially in the domain of quantificational status where crosslinguistic coverage is lacking, introduced a rare universal NPI, and proposed treating it on a par with existential PPIs. It has also shown the inadmissibility of an innovative account of modal scope in a number of fusional European languages in agglutinative Turkish. A detailed empirical understanding of negative dependencies across languages, as we have tried to contribute to with this article, is instrumental in mapping out the landscape of negative dependencies.

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Abbreviations

1/2/3pl/sg	Predicative agreement (person/number)
Abil(1/2)	Abilitative
Acc	Accusative
Aor	Aorist
Com	Comitative
Cond	Conditional
Cop	Copula
Dat	Dative
F	Feminine
Fut	Future
Gen	Genitive
Hon	Honorific
Imp	Imperative
Loc	Locative
M	Masculine
Nec:	Necessitative
Neg	Negative
Nom	Nominative
Nomin	Nominalizer
Opt	Optative
Perf	Perfective
Pl	Plural
Poss1/2/3pl/sg	Possessive agreement (person/number)
PQ	Polar question morpheme
Pres	Present
Prt	Participle
Q	Question morpheme
Sg	Singular
Top	Topic

Notes

[1] We gloss neg-words as *n-body*, *n-thing* etc., following Giannakidou (2000).

[2] See Giannakidou and Mari (2018) and references therein for alternative accounts of modal/negative interactions.

[3] The string *–miyor* 'neg-pres' features a contraction of the negative (*-mA*) and the present (*-Iyor*) morphemes with two potential parses. We parse the high vowel alongside the present mopheme (hence assume the deletion of the preceding morpheme's vowel) because it undergoes rounding harmony which does not apply morpheme-internally (*söyle* 'say'; *söyl-üyor* 'says'; **söyli-yor*).

[4] Morphophonological processes such as vowel harmony affect the surface form of bound morphemes in Turkish. The citation form includes a capital letter to indicate segments sensitive to such changes.

[5] An anonymous reviewer points out that for some speakers of Turkish the surface reading $\forall > \neg$ is still available.

[6] *Kimse*, originally meaning 'person', appears to have been largely restricted to negative environments over time, rendering *hiç* optional (see Kelepir 2001). This negative *kimse* has exceptional lexical stress on the first syllable. We will use *hiçkimse* in relevant examples to ensure a neg-word reading.

[7] Note that not every NPI can be licensed outside negative (i.e., anti-additive) contexts. NPIs like English *in years* require licensing by negative (anti-additive) contexts only.

[8] See Nicolae (2015) and Mayr (2013) for a discussion to what extent questions are downward-entailing.

[9] Giannakidou (2007) discusses Greek *oute kan* ('(not) even') which displays a similar effect.

[10] This judgement is a bit nuanced, which may be due to the presence of the competing negated form. Also notable is the unacceptability of *bile* 'even' under the non-negated construction, which may otherwise optionally occur alongside such minimizers, e.g., *tek kuruş bile* 'even a single dime'. The reason for this may be the clashing focus requirements imposed by the non-negated *ne...ne...* construction and *bile* 'even'.

[11] Another construction with negativity expressed by means other than clausal negation could be negation by *bok/nah* 'shit/over here' exemplified in (i).

(i) Bok/nah okul-a git-ti-n.
Shit/over here school-DAT go-PAST-2SG
'You didn't go to school. You're lying. ~It's bullshit that you went to school.'

This expression has a strong adversarial flavor and appears to have the additional meaning of challenging the other interlocutor's truthfulness. *Bok/nah* does not license neg-words, in support of our characterization, but we leave it out of the discussion as the discourse structure that licenses these statements is not understood well.

(ii) Bok hiç okul-a git*(-me)-di-n.
shit n-ever school-DAT go-NEG-PAST-2SG
'It's bullshit that you ever went to school.'

[12] Note that the opaque forms cross-cut Kornfilt's (2007) proposal on finite and non-finite embeddings.

[13] It should be noted that the diagnostic readings are violations of the Immediate Scope Constraint (Linebarger 1987), which forbids an NPI and its licenser to be intervened by another scope-taking element. However, Shimoyama argues that adverbials appear to be more lightly limited by the constraint, allowing the crucial readings of sentences like (38) to surface.

[14] The reason is that nowadays both theories that take neg-words to be existentials (e.g., Zeijlstra 2004) and theories that take neg-words to be universals (e.g., Giannakidou 2000, 2006) predict the same locality footprint.

[15] Here, the reason is that English negative quantifiers, just like neg-words and universal quantifiers, make an existential commitment (as in *No student left*), even though English negative quantifiers are nowadays uncontroversially taken to be negative existentials (cf. Iatridou and Sichel 2011).

[16] Kelepir (2001) briefly considers whether *hiç*-expressions may be universals with data like (40a) and concludes that this is not a reliable diagnostic, because numerals, which are not universals, may be modified by *almost* while *each*, a universal, may not.

[17] We mark judgements with a $^{??}$ throughout to indicate that under a particular prosodic constellation, this reading may ensue. In this highly compressed prosody, the subject prosodic boundary is missing and the resulting utterance fits a context such as: "You said if three or more students skip class, we can close it down. Now, *three or more students (indeed) skipped class*, so let's close it down."

[18] The fact that this reading is suboptimal may be due to an intervention effect, shown to be present in Turkish by Kelepir (2001). In (44) an intervention does not arise, suggesting that only high-scoping adverbials are interveners to the licensing of *hiç*-expressions, which would be in line with the conclusion that they are existentials.

[19] The modals are ambiguous between permission, probability and ability, but we use their deontic meaning for illustration; see Note 26.

[20] As noted at the introduction, some speakers do allow the wide scope readings of the universals.

[21] Note that *few* is not anti-additive because *Few students danced and few students sang* does not entail that few students danced or sang. The same holds for the near Turkish equivalents *birkaç/az sayıda*.

[22] A reviewer points out that English *few* is not perfectly rendered by Turkish *birkaç*. We are aware of this, however there is no obvious alternative. We include here the expression *az sayıda* (lit. in small numbers), as well, which also is not anti-additive.

[23] Two notes about these data: (1) The second reading becomes more pronounced if the object is fronted, in line with observations regarding scope rigidity. (2) For reasons unclear to us, the equivalent of the expression *at most n* appears with a focus accent.

[24] For those speakers who do not get the narrow scope reading of these universals, the relevant quantifiers are not subject to NENEC. As NENEC is lexically encoded, such variation is not unexpected; such speakers' lexical representation of universal quantifiers then lack NENEC.

[25] Note that this does not entail that in nominalizations Spec,TP must be filled by the subject. As Kornfilt and Whitman (2011) argue, in those nominalizations T is defective (as it does not assign nominaitive case). If T is defective, there is no reason to assume that it should behave like a non-defective TP when it comes to attracting the subject.

[26] Descriptive work on Turkish modals often erronously refers to these forms as epistemic (*–A*, *–Abil*) and deontic (*–mAlI*). We use the terminology from Kratzer (1991) and refer to them as existential and universal modals, respectively. Universal modals involve universal quantification over possible worlds/situations, covering English *must*, *should*, *ought* etc. Existential modals involve existential quantification, as is the case with English *may* or *can*. This distinction concerns modal force. Notions like epistemic and deontic, on the other hand, refer to modal flavor: whether the modal is referring to knowledge and beliefs (epistemic modality) or rather to obligations (deontic modality). Notice that beside their more commonly addressed flavors, the Turkish universal modal may be used with an epistemic flavor (e.g., *Merve uyuyor olmalı* 'Merve must be sleeping') and the existential may be used with a deontic flavor (e.g., *Girebilirsiniz* 'You may come in') (also see Emeksiz 2009). In semantic nomenclature, the Turkish modals appear to align with modal force while expressing all modal flavors.

[27] The negation > universal modal construal is rendered with a periphrastic construction:

(i) gör-me-sin-e gerek yok
see-NOMIN-POSS3SG-DAT need not.exists
'does not have to see' (Lit. 'there is no need of his seeing')

[28] This is because the non-negated existential modal (possibility, permission) is semantically the negation of the negative modal constellation expressed with abil1 *–A*, as ¬ > ¬ > ◊ = ◊. The negation of the constellation expressed with abil2 *–Abil*, which outscopes negation, would be a universal modal (a requirement) (¬ > ◊ > ¬ = □ > ¬ > ¬ = □).

[29] We focus here on the contexts which we can straightforwardly test with Turkish modals. For example, it is not obvious to us what constitutes a comparable case of metalinguistic negation. In the case of contrastive negation, like English, Turkish does not allow stress shift to modals. Similarly, tests relying on embedded clauses do not work in Turkish because *–mAlI* cannot be embedded and structures with intervention are generally hard to find due to scope rigidity (cf. Section 3). The reader is referred to Section 2 of Iatridou and Zeijlstra (2013) for the full set of tests used therein.

[30] Two notes about this example and its existential counterpart in (73b): (1) We have modified the original example (70b) from Zeijlstra and Iatridou to illustrate the same point with both the universal and the existential. (2) Note that these two examples are in fact ambiguous between three readings, but we suppress two of them with the given continuation, to keep things simple. The remaining readings are modal > because > ¬ and because>modal > ¬. The three readings lead to subtle differences in intonational phasing, but none shows the scope reversal expected under the PPI rescue effect tested.

[31] See Note 30.

[32] Our model comes closest to Enç (2004), who recognizes the distinct finite and verbal "zones". In other previous treatments of the syntax of Turkish TAM morphology, the existential modal is included in the first slot of TAM morphemes (e.g., Kornfilt 1996; Kelepir 2001).

[33] We take the verbal versus finite status of the morphemes to be lexically specified.

[34] We have noted this form in natural conversation and were able to find similar uses online. (i), from a Twitter user, appears to be a humorous exploitation of this morphological possibility which is present even without verb stems (morpheme boundaries inserted by us):

(i) –ebil-miş her şey –ebil-ebil-ir.
ABIL-PRT every thing ABIL-ABIL-AOR
'Everything that (once) could, can (again) be possible.'
(https://x.com/ozgnbtl/status/1458718004158644230, URL last accessed on 28 October 2024)

[35] Stacking two *–Abil* morphemes in the presence of negation as in (ii) appears borderline acceptable to us and to our editor, who directed our attention to such data. Note that (ii) is not a counterexample to the NPI analysis of *–A*. Pertinent to the previous discussion on the existential paradigm, such data might show that *–Abil* is indeed possible under negation under certain circumstances. However, the acceptability of such data is hard to verify empirically, as the simpler (79) is already infrequent.

(ii) ?gör-ebil-me-yebil-ir
see-ABIL-NEG-ABIL2-AOR
'may not be able to see'

[36] For speakers who disprefer the ability modals in commands as in (83), (84b) is similarly sub-optimal. The optative can be inserted to yield a fully acceptable rendition with a comparable meaning.

[37] Per Fn. 35, it is not clear whether *–Abil* can merge lower than negation and if not, what prohibits this. Our model can in principle accommodate multiple merger sites over and under negation, as we only make reference to the verbal category of the resulting forms, which would be satisfied both ways.

[38] For completeness' sake, the finite slot (let us call it TAM-1) may be followed by an additional slot (let us call it TAM-2) hosting one of a subset of three finite TAM elements. The past tense morpheme -DI is in TAM-2 in (iiia) (and in example 61) and in TAM-1 in (iib). TAM-2 (a), unlike TAM-1 (b), induces irregular word stress, and is accompanied by the insertion of a non-morpho-phonological glide after a vowel-final base (which is the fused version of the achaic verbal root *i-*, a copula according to Kornfilt 1996). The presence of the optional TAM-2 does not challenge our analysis of TAM-1 as T. On the contrary, TAM-2 cannot skip TAM-1 and impose pre-stressing and/or y-insertion on its own (c), which strengthens our conclusion that TAM-1 is obligaroty and is hence a realization of T.

(iii) a. söyle-melí-y-di 'must have said' (-y- after vowel-final base, irregular non-final stress)
b. söyle-dí 'said' (no -y- after vowel-final base, regular final stress)
c. *söylé-y-di

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