

Exceptionally Optional Negative Concord with Turkish *neither..nor*

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Abstract This paper presents a novel account for the optionality of negative concord observed with *neither..nor* coordinations, in an otherwise strict negative concord language – Turkish. I argue that this phenomenon is triggered by the type-flexibility of coordinations, that contrasts with the type-rigidity of other negative concord items. The semantic type of the negative concord item then affects its syntactic position relative to the Turkish NegP: a DP *neither..nor* coordination, just like a generalized quantifier like *nobody*, originates in the vP below the NegP, while a *neither..nor* operator that coordinates tensed propositions finds itself above the NegP position. These different positions result in different surface facts: when below the NegP position, there is negative concord with sentential negation; when above, there isn't. Thus, we can account for the exceptionally optional negative concord phenomenon by seamlessly integrating it into an existing system developed to account for strict negative concord (Zeijlstra, 2004, 2008). This reductionist account therefore contrasts with alternative analyses that explain optionality by adding complexity to the mechanics of the negative concord system (Şener and İşsever 2003 for Turkish; Szabolcsi 2018a for Hungarian). Finally, this analysis crucially relies on a theory of coordination operators as type-flexible, and therefore contributes an argument against a view of coordinators as having a rigid propositional type (Hirsch, 2017; Schein, 2017).

1 Introduction

Negative Concord (NC) is the phenomenon by which two or more negative elements yield an interpretation equivalent to one semantic negation. Sentence (1) is an example from Turkish.

- (1) **Hiçkimse** gel -*(**me**) -di.
nobody come -*(NEG) -PAST
Nobody came.

This sentence has two negative elements, a sentential negation marker and a negative quantifier, but only one negation is interpreted (see section 2 for precise definitions of NC and what is meant by “negative elements”). Negative concord comes in slightly different flavors, and languages can be categorized along those flavors. In the large literature on NC (Acquaviva, 1996; Collins & Postal, 2014; Collins, Postal, & Yevudey, 2017; De Swart & Sag, 2002; Giannakidou, 1997, 2000; Haegeman & Zanuttini, 1991, 1996; Labov, 1972; Ladusaw, 1992; Van der Auwera & Van Alsenoy, 2016; Zeijlstra, 2004, 2008, a.o.), we find descriptions and analyses of languages with ‘strict NC’ (negative elements obligatorily cooccur with sentential negation, e.g. Russian), ‘non-strict NC’ (post-verbal negative elements obligatorily cooccur with sentential negation, e.g. Spanish) and languages with ‘negative spread’ (two negative quantifiers are interpreted as one sentential negation, e.g. French). However, more rare or local NC phenomena like ‘optional NC’ (Espinal, Tubau, Borràs-Comes, & Prieto, 2016, for Catalan) and ‘hybrid NC’ (Surányi, 2006; Szabolcsi, 2018b, for Hungarian), are sparsely discussed, and more work is needed to see how they fit into our general understanding of NC. This paper is devoted to studying a particular case that displays these rarer phenomena: in particular, the optionality of NC observed with *neither..nor* coordinations in Turkish, a language that otherwise displays strict NC. Sentence (2) exemplifies this phenomenon, where the *ne..ne* phrase can interchangeably cooccur with or without sentential negation, to yield the same meaning, with one negation interpreted.¹

- (2) **Ne Ali ne Beste gel** -(me) -di.
 NE Ali NE Beste come -(NEG) -PAST
 Neither Ali nor Beste came.

The NC behavior of these *ne..ne* phrases contrasts with that of other items such as *nobody*, that display ‘strict NC’, i.e. obligatorily co-occur with sentential negation, as shown in (1). We thus observe distinct behavior between NC items across the language: this makes the Turkish NC system a ‘hybrid’.

There are two possible hypotheses for the source of this hybridity. The first is that Turkish negative quantifiers and *neither..nor* phrases have an inherently different status in the NC system of the language, possibly arbitrarily, resulting in a different NC behavior. The second is that they have the same status, but that the observed difference is due to an interaction with factors external to the NC system, that comes about in a predictable manner. In this paper, I will argue for the second hypothesis, in a unified, reductionist account for the hybridity and optionality observed in Turkish NC. In this account, negative quantifiers and *ne..ne* phrases have the same status in the NC system, and optional and hybrid NC are intricately related surface phenomena that arise from factors that lay outside of the mechanics of Turkish NC. Namely, I observe that the presence of overt NC correlates with the semantic type of the Negative Concord Item (NCI), which determines its structural relationship to the

¹ All Turkish data in this manuscript was obtained from elicitation and confirmation with four native Turkish speakers, sometimes more. A questionnaire was sent to ten more native speakers with all the data present in this manuscript, asking for grammaticality and felicity judgments on a 5-point scale. I comment on variation between speakers whenever it was observed (indicated by the symbol “%” on the examples).

positions of sentential negation. This affects which syntactic position of negation has to be utilized, which in turn results in the presence or absence of NC on the surface.

In particular, NCIs of type $\langle\langle e,t \rangle, t\rangle$ are found in verbal argument positions, and are therefore *c*-commanded by the position of the sentential negation marker in their base position; in these cases, NC is obligatorily observed. NCIs of type t contain the position of sentential negation; as a consequence, they must be licensed by a higher covert negation, and NC with a sentential negation marker does not occur. Thus, depending on whether they coordinate DPs (of type $\langle\langle e,t \rangle, t\rangle$) or TPs (of type t), *ne..ne* phrases will either be *c*-commanded by or contain the position of sentential negation marker: only in the former case is sentential negation realized. This accounts for the apparent optionality of NC with *ne..ne* phrases. Furthermore, negative quantifier NCIs like *hiçkimse* (‘nobody’) have a typical generalized quantifier type $\langle\langle e,t \rangle, t\rangle$, and are therefore *c*-commanded by the negation marker, licensing its obligatory appearance, and accounting for their well-known strict NC behavior.

These facts are straightforwardly accounted for in a theory of NC as syntactic agreement (Zeijlstra, 2004, 2008): NCIs carry uninterpretable negative features [uNeg], and have to be *c*-commanded within a phase by an element carrying interpretable features [iNeg]. Among [iNeg] carriers, we find the overt sentential negation head, which immediately *c*-commands the vP, and a covert negative operator, which is merged above the CP. The overt negative marker licenses NCIs originating in the vP, i.e. those of type $\langle\langle e,t \rangle, t\rangle$; the covert negation licenses NCIs that are not *c*-commanded by overt sentential negation – in particular, *ne..ne* phrases of type t .

In sum, the optional NC observed with *ne..ne* phrases is triggered by the type flexibility of the coordination operator, while hybrid NC is due to the difference in type between *ne..ne* phrases and negative generalized quantifiers. This work contributes to understanding of the more subtle aspects of the typology of NC, and it offers an analysis that can be checked for other languages and naturally extended to them. Furthermore, this analysis relies on, and therefore provides support for, a theory that allows type flexibility for coordinations, as proposed by Hendriks (1993); Partee and Rooth (1983); Winter (1996), contra conjunction reduction proposals by Hankamer (1979); Hirsch (2017); Ross (1967); Schein (2017) that make coordinators of propositional type only.

This paper is organized as follows. In the background section 2, I present the details of the data characterizing the hybridity of Turkish NC between strict and optional NC, and give some definitions. In section 3, I provide empirical evidence for the proposed dependence of the presence of NC on the semantic type of the NCI (propositional vs. not). In section 4, I formalize the analysis using Zeijlstra’s (2004, 2008) theory for NC. In section 5, I discuss two alternative analyses for Turkish optional NC with *ne..ne* phrases: a focus-dependence analysis of as proposed by Şener and İşsever (2003), and a Hungarian-style analysis as proposed by Szabolcsi (2018a, 2018b). In section 6, I discuss how the proposed analysis may extend to other languages. Finally, in section 7, I conclude.

2 Turkish Negative Concord: hybrid between strict and optional

Turkish has been described as a strict NC language (Zeijlstra, 2004), because of the obligatory presence of a sentential negation marker, such as the verbal negation suffix *-mA*² or the copular negation *değil*, whenever a negative quantifier, e.g. *hiçkimse*, is present in the sentence, as in (3) and (4). Despite the presence of two negative elements, no double negation (DN) reading is available.

- (3) Hiçkimse gel-*(me)-di.
 nobody come-*(NEG)-PAST
 Nobody came. / *Nobody didn't come. (NC, *DN)
- (4) Hiçkimse hasta *(değil).
 nobody sick *(COP.NEG)
 Nobody is sick. / *Nobody is not sick. (NC, *DN)

Authors have challenged the descriptive claim that Turkish is a strict NC language (Gencan, 1979; Göksel, 1987; Şener & İşsever, 2003), observing that NC with *ne..ne* (*neither..nor*) phrases is optional. In other words, they do not need to co-occur with a sentential negation marker, as shown in (5) and (6). Furthermore, when they do, both a single and a double negation reading are available.

- (5) a. Ne Ali ne (de)³ Beste gel-di.
 NE Ali NE (too) Beste come-PAST
 Neither Ali nor Beste came.
- b. Ne Ali ne (de) Beste gel-me-di.
 NE Ali NE (too) Beste come-NEG-PAST
- i. Neither Ali nor Beste came. (NC)
 (Context: We asked both Ali and Beste to come to the party, but neither showed up.)
- ii. Neither Ali nor Beste didn't come. (= They both came.)⁴ (DN)
 (Context: We asked both Ali and Beste to not come to the party, but neither obeyed.)

² As with most suffixes in Turkish, the sentential negation marker undergoes vowel harmony depending on the nature of the preceding vowel. Specifically, it harmonizes with fronting: if the preceding vowel is back, negation will be realized as *-ma/*; if the vowel is front, it will be realized as *-me/*. As per Turkological tradition, I will refer to the vowel undergoing fronting harmony as 'A'. Thus, the negation affix is notated '*-mA*'. Other allophonic variation will also be notated with capital letters, and involves vowel harmony for rounding and fronting ('I'), and voicing assimilation.

³ The particle *da* is always optional, usually preferred, in all reiterated particle constructions, appearing after the last particle. See section 5.2 for information on its other uses. For simplicity of presentation, I omit it in the rest of the examples of this paper.

⁴ A reviewer notes the difficulty in achieving the double negation reading in (5b-ii). Double negation readings are generally difficult to process, so we might expect them to be all the more difficult to access when they are ambiguous with a more easily processable single negation reading. Non-ambiguous double negation readings, such as "gelmemezlik etmedi" (literally 'didn't do not-coming'), or in such examples as (21) and (22), are easier to access.

- (6) a. Ne Ali ne (de) Beste hasta.
 NE Ali NE (too) Beste sick
 Neither Ali nor Beste is sick.
- b. Ne Ali ne (de) Beste hasta değil.
 NE Ali NE (too) Beste sick COP.NEG
- i. Neither Ali nor Beste is sick. (NC)
- ii. Neither Ali nor Beste is not sick. (= They are both sick.) (DN)

In this paper, I refer to *ne..ne* sentences ‘with NC’ as those that pattern like (5b-i) and (6b-i) – where the *ne..ne* phrase co-occurs with a sentential negation marker but only one negation is interpreted; *ne..ne* sentences ‘without NC’ correspond to those that pattern like (5a) and (6a) – without sentential negation, or (5b-ii) and (6b-ii) – with a sentential negation and a double negation reading, i.e. sentences where the *ne..ne* phrase appears to contribute its own semantic negation.

Speakers claim that truth-conditionally equivalent *ne..ne* sentences without and with NC can be used interchangeably (i.e. (5a) vs. (5b-i), or (6a) vs. (6b-i)). Nevertheless, *ne..ne* sentences with NC are reported to sound slightly more marked (though not less grammatical, i.e. they always receive the highest rating on a 5-point scale). I will speculate about this slight markedness in sections 3.1.6 and 5.1.4, once the source of the optionality is uncovered.

The comparison between *ne..ne* and *hiçkimse* is warranted because both fall under the definition of *Negative Concord Item* (or “n-word”: Giannakidou (2006); Giannakidou and Zeijlstra (2017); Laka (1990), a.o.), that I give below in (7).

- (7) A *Negative Concord Item (NCI)* is an element that:
- a. can be used in structures containing sentential negation or another NCI yielding a reading equivalent to one logical negation;
- b. can be used as a negative fragment answer.

Requirement (7a) is satisfied for *hiçkimse* by data exemplified by (3).⁵ For *ne..ne* phrases, this requirement is satisfied by the single negation reading of (5b). Requirement (7b), i.e. the ability for *hiçkimse* and *ne..ne* phrases to be fragment answers, is shown to be satisfied by the following:

- (8) *Ali and Beste were expected at the party. I didn’t go and want to know who was there.*
- Kim gel-di? – {Hiçkimse / Ne Ali ne Beste}, maalesef.
 who come-past {nobody / NE Ali NE Beste} unfortunately
- Who came? – {Nobody / Neither Ali nor Beste}, unfortunately.

⁵ Turkish NCIs like *hiçkimse* have been often referred to as Negative Polarity Items in the literature (see, e.g. Keleşir (1999)); this is essentially due to a lack of a common definition between NCIs and NPIs. I follow much of the literature (Giannakidou & Zeijlstra, 2017, a.o.) that states that a core distributional difference between NCIs (e.g. *hiçkimse* ‘nobody’ or *asla* ‘never’) and NPIs (e.g. *hiç* ‘ever’) is that the latter do not appear in fragment answers. The contrast is shown below for NCI *asla* ‘never’ vs. NPI *hiç* ‘ever’.

- (1) Beni asla/hiç unut-*(m)-acak-sın. (2) – Beni ne zaman unut-acak-sın? – Asla/*Hiç.
 1s.acc never/ever forget-*(NEG)-FUT-2S 1s.acc what time forget-fut-2s never/ever
 You will never forget me. – When will you forget me? – Never.

We can identify two classes of NCIs in Turkish: 1) generalized quantifier NCIs: quantifiers like *hiçkimse* (“nobody”), *hiçbirşey* (“nothing”), *hiçbir zaman* (“never”), for any noun *X*, *hiçbir X* (“no *X*”), *asla* (“never”)... (Keleşir, 1999; Özyıldız, 2017); 2) coordination NCIs: *ne..ne* phrases. The first class, those of quantifier NCIs, behave strictly, i.e. like *hiçkimse* in example (3). I give the definition of *strict NC* in (9). The second class, the *ne..ne* phrases, behave optionally, as shown in example (5). The definition of *optional NC* is given in (10).

- (9) A Negative Concord Item has a *strict NC* behavior if it must co-occur with an overt sentential negation marker (except in fragment answers).
- (10) A Negative Concord Item has an *optional NC* behavior if it:
- a. can provide a semantic negation of its own in utterances other than fragment answers;
 - b. can engage in NC with a negation marker or NCI.

In these definitions, *strict NC* and *optional NC* are properties of the behavior of NCIs, rather than properties of a grammar, as they are standardly defined in the literature. This shift in definitions reflects the new observation that some languages, like Turkish, are ‘hybrid’,⁶ i.e. have NCIs that do not behave uniformly in how they engage in NC.

In this section, I have shown that two classes of NCIs in Turkish, namely negative quantifiers and *ne..ne* phrases, have a different NC behavior. In this paper, they will receive a unified analysis in an account of Turkish NC, despite the differences in their surface behaviors. In the next section, I will expose their identical status by showing that the difference in NC behavior does not depend on the NCI, but on its semantic type, which will determine their syntactic position with respect to sentential negation, correlating with different surface behaviors.

3 The dependence of NC on the NCI’s semantic type in Turkish

In this section, I show how the presence of NC depends on the semantic type of the NCIs involved. Subsection 3.1 shows that the presence of NC depends on the type of the constituents coordinated by the *ne..ne* phrase. Subsection 3.2 generalizes this result to all NCIs in Turkish.

3.1 Optional NC with Turkish *ne..ne* phrases

I propose a novel descriptive analysis for the optionality of NC with Turkish *ne..ne* phrases, as strictly depending on the flexibility of the semantic type of the constituents coordinated by *ne..ne*. This flexibility allows for coordinations of different sizes, for

⁶ The term “hybrid” was coined by Surányi (2006) to describe the Hungarian NC system. While Surányi used it to describe his analysis of the underlying nature of Hungarian NCIs, I use it in a purely descriptive way, which is how Szabolcsi (2018a, 2018b) re-uses the term to describe Hungarian NC.

example TP coordination, when *ne..ne* coordinates tensed propositions, or DP coordination, when *ne..ne* coordinates generalized quantifiers. As a result, the *ne..ne* coordination operator will have a different syntactic relationship with respect to a clausemate sentential negation, found in Turkish between T and v (as shown by the order of morphemes in the verbal complex v-Neg-T). Either the position of negation is contained in the coordination, in cases of tensed propositions, or it is able to outscope it, in cases of DP coordination, and a variety of other cases. I propose that this relationship determines whether the *ne* operator and sentential negation engage in NC with each other: when the position of negation is contained in the *ne..ne* coordination, NC is not possible, but when it is outside of it, it is obligatory.

This established, we can reduce the apparent optionality of NC with *ne..ne* phrases to the actual optionality of underlying structures for a given string containing a coordination. It is standardly assumed that a coordination structure whose surface form is of the type *ne XP₁ ne XP₂ VP* is structurally ambiguous between a coordination of XPs and full clausal [XP VP] coordination with elided (or raised out) material. Therefore, the potential space of possibilities for such a structure, given a *ne..ne* sentence without and with NC with sentential negation, includes the options in (11).

(11) Potential structures for the strings *ne XP₁ ne XP₂ VP-(neg)*:

a. *ne XP₁ ne XP₂ VP* (*ne..ne* phrase without NC):

- i. [Ne XP₁ ne XP₂] VP.
- ii. Ne [XP₁ <VP>] ne [XP₂ VP].

b. *ne XP₁ ne XP₂ VP-neg* (*ne..ne* phrase with NC):

- i. [Ne XP₁ ne XP₂] VP-neg.
- ii. Ne [XP₁ <VP-neg>] ne [XP₂ VP-neg].

However, I propose that because of additional constraints imposed by the NC system, not all these possibilities are available for Turkish *ne..ne* phrases, and that only two of the four are possible, in the way shown in (12).

(12) Proposed available structures for the strings *ne XP₁ ne XP₂ VP-(neg)*:

a. Without NC, only clausal coordination available:

- i. *[Ne XP₁ ne XP₂] VP.
- ii. Ne [XP₁ <VP>] ne [XP₂ VP].

b. With NC, only XP coordination available:

- i. [Ne XP₁ ne XP₂] VP-neg.
- ii. #Ne [XP₁ <VP-neg>] ne [XP₂ VP-neg].⁷

Note that there is another possible structure for the string with negation, namely: [Ne [XP₁ <VP>] ne [XP₂ VP]]-neg. Whenever such a configuration is possible, NC is obligatory, as a case where negation outscoops the coordination. However, due to

⁷ The # indicates that the intended NC reading is unavailable. However, it is grammatical under the double negation reading.

Turkish-specific morphological restrictions, this structure is rarely observed (as we will see in section 3.1.1, where I discuss what kinds of constituents in Turkish can be coordinated by *ne..ne*). In particular, whenever tense is expressed on the verbal complex, this possibility will not be available, and therefore negation will always be contained in the coordination.

I argue for the generalization in (12) by providing evidence that cases of unambiguous tensed clause *ne..ne* coordination (which always contain sentential negation) are only grammatical without NC (section 3.1.2), and cases of unambiguous DP *ne..ne* coordination (which never contain sentential negation) are only grammatical with NC (section 3.1.3). I then show in section 3.1.4 that this analysis makes predictions about semantic scope with respect to verbal elements, which are borne out. Finally, in section 3.1.5, I present an additional argument from prosody: I argue that prosodic structure in Turkish coordinations reflects underlying syntactic structure, and the prosody associated with clausal coordination is only available without NC, and the one associated with XP coordination is only available with it. In section 3.1.6 I conclude, and discuss an implication of the analysis.

3.1.1 What can and *(can)not be coordinated in Turkish

Ne..ne phrases, as any coordination, can overtly coordinate virtually any pair of syntactic phrases of the same type. However, the syntax of Turkish does impose some restrictions on what syntactic phrases can be coordinated, notably with verbal complexes, which I discuss in this section, and will become particularly relevant in the discussion in the following section, 3.1.2.

In particular, the agglutinative nature of the Turkish verb raises the question as to what is allowed to be coordinated within a verbal complex. In particular, proper subparts of a verbal complex generally cannot be coordinated, i.e. no bound verbal suffix may be left outside the coordination.⁸ Such ungrammatical examples are shown in (13a), (13b) and (14a); grammatical counterparts contain fully inflected verbal complexes, as in (13c) and (14b). I give examples with *hem..hem* ('both..and'), but these are replicable with any other type of Turkish coordination, including *ne..ne*.

- (13) a. *Hem ye hem iç-ti-m.
HEM eat HEM drink-PAST-1SG
- b. *Hem ye-di hem iç-ti-m.
HEM eat-PAST HEM drink-PAST-1SG
- c. Hem ye-di-m hem iç-ti-m.
HEM eat-PAST-1SG HEM drink-PAST-1SG
I both ate and drank.
- (14) a. *Hem ye hem iç -me-di-m.
HEM eat HEM drink -NEG-PAST-1SG

⁸ Note that this restriction contrasts with the possibility of suspended affixation (Lewis, 1975) of bound affixes in the nominal domain, where 'suspended affixation' refers to the optional phenomenon by which an affix or a sequence of affixes takes scope over all the coordinands, but appears on the edgemost coordinand only, instead of on all of them.

- b. Hem ye-me-di-m hem iç-me-di-m.
 HEM eat-NEG-PAST-1SG HEM drink-NEG-PAST-1SG
 I both didn't eat and didn't drink.

This restriction ensures that coordinations containing the verb also contain the highest projection expressed on the verbal complex. In cases shown above, tense and inflection are present, which means that the TP is part of the coordination. Based on this observation, I assume that deficient verbal complexes remain ungrammatical when elided. This means that a case of overt DP coordination 'hem Ali hem Beste yemedi', (both Ali and Beste didn't eat) cannot be associated with a structure with a bare vP coordination as in (15a); instead only DP or TP coordination structures (15b-c) are available for that string.

- (15) a. *[Hem Ali <ye> hem Beste ye]-me-di.
 HEM Ali eat HEM Beste eat-NEG-PAST
 b. [Hem Ali hem Beste] ye-me-di.
 HEM Ali HEM Beste eat-NEG-PAST
 c. Hem Ali <ye-me-di> hem Beste ye-me-di.
 HEM Ali eat-NEG-PAST HEM Beste eat-NEG-PAST

As a result, whenever any part of a tensed verb is part of the coordination, we can be sure that the entire TP (including negation, if present) is part of the coordination.

There is a notable (apparent) exception to the ban on splitting verbal complexes in coordinations, which has been discussed by Kornfilt (1996). Bare participial verbs may be coordinated, in which case additional inflectional material can appear outside the coordination. In Turkish, participial verbal complexes include those ending with the progressive marker (*-iyor*), future (*-(y)AcAK*), reported past (*-miş*), and aorist (*-r*), but not past tense *-DI*. The participial nature of these affixes can be diagnosed by having them be complements to a copula. Below I show the distribution of the participial future suffix *-(y)AcAK* in (16), that contrasts with that of the past tense suffix *-DI* in (17). The former can appear with copular forms *değil* and *-Dir*, while the latter cannot.

- | | |
|--|--|
| <p>(16) a. gid-ecek değil
 go-fut neg.cop
 she will not go
 b. gid-ecek-tir
 go-fut-ep.cop
 she will definitely go</p> | <p>(17) a. #git-ti değil
 go-past neg.cop
 <i>int.</i> she didn't go
 it's not that she went
 b. *git-ti-dir
 go-past-ep.cop</p> |
|--|--|

In addition, in contrast with non-participial verbal forms, participial forms such as those marked by *-(y)AcAK* can be coordinated, leaving additional inflectional material (that is analyzed as attaching to a copula) outside the coordination, as shown in (18).

- (18) Hem yi-yecek hem iç-ecek -Ø-ti-m.
 HEM eat-FUT HEM drink-FUT -COP-PAST-1SG
 I was going to both eat and drink.

Therefore, a verbal coordination in Turkish may be outscoped by negation only when it involves a participial form, as in (19), and only with the copular negation *değil*.

- (19) Hem yi-yor hem iç-iyor değil-di-m (/*-ma-dı-m).
 HEM eat-PROG HEM drink-PROG COP.NEG-PAST-1SG (/*-NEG-PAST-1SG)
 I wasn't both eating and drinking.

In this paper, I will refer to ‘tensed verbs’ when talking about verbs that are marked by inflectional tense like past tense *-DI*, but not those marked with participial tenses. Kornfilt refers to these suffixes as “fake tenses”, and analyzes them as introduced by a defective, lower TP (Borsley & Kornfilt, 2000). Alternatively, these affixes can be semantically analyzed as aspectual operators, instead of temporal, as argued by Jendraschek (2011) (e.g. the apparent future morpheme *-(y)AcAK* is in fact the prospective aspect), and can thus simply be introduced by AspP. As a consequence, no coordination of real tensed verbs can be outscoped by a negation marker.

I end with another property of Turkish coordinations: overt coordination of tensed verbs, e.g. (20a-b), always involves underlyingly clausal coordination, even when verbal arguments appear outside of it. When said tensed verbs are negated (as in (20a)), negation can only be interpreted inside the coordination (i.e. the sentence cannot have the reading “Ömer didn’t both eat and drink”), which means that it cannot be a simple morphological reflex of a higher null negation outscoping the coordination,⁹ but rather the actual realization of the interpretable head of a negative projection. Arguments of the verb are assumed to be introduced below negation, therefore they must be contained inside the coordination in their base position, from which they undergo ATB extraction to a position outside of it. This is the case for the subject in (20a) and the object in (20b).

- (20) a. Ömer hem ye-me-di hem iç-me-di.
 Ömer HEM eat-NEG-PAST HEM drink-NEG-PAST
 Ömer both didn’t eat and didn’t drink.
 b. Bu kitab-ı hem al-dı-m hem oku-du-m.
 this book-acc hem buy-past-1sg hem read-past-1sg
 I both bought and read this book.

3.1.2 When *ne..ne* coordinates tensed propositions, there is no NC

In this section, I argue that all cases of *ne..ne* coordinations of tensed propositions are cases in which there is no NC between the NCI and the negation marker *-mA*. I do so by looking at various cases of unambiguous propositional coordination: overt coordination of tensed clauses, forward gapping structures, unambiguous backward gapping structures, and tensed verb coordinations.

⁹ This option would resemble a verbal equivalent of the analysis given by Bayırlı (2017) for nominal suffixes in Turkish and other languages. This further reveals that verbal and nominal suffixes have a different status in Turkish, as already observed for suspended affixation, mentioned in footnote 8.

First, simple overt clausal *ne..ne* coordination is incompatible with NC with sentential negation *-mA*. In a context that makes the single negation reading available, but not the double negation one, as in (21a), *ne..ne* can felicitously coordinate non-negated clauses. However, a *ne..ne* coordination of negated clauses in that same context is infelicitous (indicated by '#'), which means NC between the *ne..ne* coordinator and the *-mA* negation is not observed in this case. In contrast, the *ne..ne* coordination of negated clauses is nevertheless grammatical and felicitous in a context that makes the double negation reading available, as in (21b), underlining the possibility of a reading without NC.¹⁰

- (21) a. *Context: We were expecting Deniz to dance and Tunç to sing. In the end they were both too nervous and gave up.*
- i. Ne Deniz dans et-ti ne Tunç şarkı söyle-di.
ne Deniz dance do-past ne Tunç song say-past
Deniz didn't dance, nor did Tunç sing. (no-NC possible)
- ii. #Ne Deniz dans et-me-di ne Tunç şarkı söyle-me-di.
ne Deniz dance do-neg-past ne Tunç song say-neg-past
intended: Deniz didn't dance, nor did Tunç sing. (NC impossible)
- b. *Context: At parties, Deniz always dances and Tunç always sings. But this time we had to make them promise they wouldn't, to keep professional. They both had trouble keeping their promise.*
- Ne Deniz dans et-me-di ne Tunç şarkı söyle-me-di.
ne Deniz dance do-neg-past ne Tunç song say-neg-past
Deniz didn't not dance, nor did Tunç not sing. (DN possible)

Similarly, forward gapping sentences (Hankamer, 1971; Kornfilt, 2012) are taken to be clausal coordination structures that elide part of the material in the second coordinand. And indeed, in forward gapping structures, like (22), NC is again unavailable.

- (22) a. Ne Deniz dans et-ti, ne Tunç.
ne Deniz dance do-past ne Tunç
Neither Deniz nor Tunç danced. (no-NC possible)
- b. Ne Deniz dans et-me-di, ne Tunç.
ne Deniz dance do-neg-past ne Tunç
- i. *unavailable: Neither Deniz nor Tunç danced.* (NC impossible)
- ii. *available: Neither Deniz nor Tunç didn't dance.* (DN possible)

In (22) and henceforth, I omit the contexts which differentiate single and double negation readings, but these can be reconstructed in the following way: a single negation reading of a *ne..ne* sentence (i.e. of the form *ne A ne B*, or the intended NC reading of *ne A-neg ne B-neg*) is associated with an expectation that A and B (e.g.

¹⁰ A minority of speakers asked appear to resist the possibility of the having the negation marker *-mA* altogether in this sentence, and comparable double negation sentences from this section, also coinciding with the judgments reported by Şener & İşsever (2003). Since this judgment involves double negation twice, it is plausible to think that the rejection of such sentences is due to a processing difficulty. If it is instead due to a different grammar, it is not the grammar I provide an analysis for in this paper.

that Deniz dance and Tunç dance for (22a) and (22b-i)); a double negation reading of a sentence of the form *ne A-neg ne B-neg* is associated with an expectation that not A and not B (e.g. that Deniz not dance and Tunç not dance for (22b-ii)).

Coordination of tensed verbal complexes is also incompatible with NC. As mentioned in 3.1.1, these are also cases of TP coordination.

- (23) a. *Ömer ne ye-di ne iç-ti.*
 Ömer NE eat-past NE drink-past
 Ömer neither ate nor drank. (no-NC possible)
- b. *Ömer ne ye-me-di ne iç-me-di.*
 Ömer NE eat-neg-past NE drink-neg-past
- i. *unavailable:* Ömer neither ate nor drank. (NC impossible)
- ii. *available:* Ömer didn't not eat nor not drink. (DN possible)

So far, we have looked at cases with overt clausal coordination, without and with ellipsis in the second coordinand, and coordination of tensed verbs. These are all unambiguous cases of clausal coordination, and all are incompatible with NC between *ne..ne* and *-mA*. However, the main claim regarding Turkish optional NC involves strings of the type *ne XP₁ ne XP₂ VP(-neg)*, which are in principle, as mentioned earlier, structurally ambiguous between an XP coordination and a full clausal coordination with 'backward gapping', i.e. missing material from the first coordinand (which has been elided or raised out). The argument made that clausal coordination is incompatible with NC should then extend to cases of underlying TP coordination with backward gapping.

We can find support for this move by building unambiguous backward gapping cases, where a subject-object string is what is overtly coordinated, as in (24) and (25). The smallest constituent that contains both the subject and the object is a complete verbal phrase – therefore the verb must be part of the coordination in the base structure. Indeed, Ross (1970) argues that such structures force the presence of verbal ellipsis, while Hankamer (1979) argues that in verb-final languages, like Turkish, backward gapping cases could be instances of Right Node Raising (see also Kornfilt (2012, 2019) for a similar proposal for backward gapping as RNR). I remain neutral about which analysis is correct since both require vP coordination (and therefore clausal, following the argument in 3.1.1), and that is what is important for our purposes. And indeed, we see that gapping structures in *ne..ne* phrases are incompatible with NC, as shown in (24) and (25). This therefore provides yet another example in which clausal coordination is incompatible with NC.

- (24) a. *Ne Ali elma ne Beste portakal ye-di.*
 Ne Ali apple ne Beste orange eat-past
 Neither Ali ate an apple nor did Beste eat an orange. (no-NC possible)
- b. *Ne Ali elma ne Beste portakal ye-me-di.*
 Ne Ali apple ne Beste orange eat-neg-past
- i. *unavailable:* Neither Ali ate an apple nor did Beste eat an orange.
 (NC impossible)

- ii. *available*: It's neither the case that Ali didn't eat an apple nor that Beste didn't eat an orange. (DN possible)
- (25) a. Ne Ali okul-a ne Beste ev-e git-ti.
Ne Ali school-dat ne Beste home-dat go-past
Neither Ali went to school nor did Beste go home. (no-NC possible)
- b. Ne Ali okul-a ne Beste ev-e git-me-di.
Ne Ali school-dat ne Beste home-dat go-neg-past
- i. *unavailable*: Neither Ali went to school nor did Beste go home. (NC impossible)
- ii. *available*: It's neither the case that Ali didn't go to school nor that Beste didn't go home. (DN possible)

In this section, I have given a variety of unambiguous cases of tensed propositional *ne..ne* coordination, all of them being incompatible with NC with the sentential negation morpheme *-mA*. This suggests that all cases of propositional *ne..ne* coordination are impossible with NC, including those whose surface realizations would in principle be ambiguous with DP coordination, like those in (26).

- (26) a. Ne [Ali <*gel-di*>] ne [Beste gel-di].
ne Ali come-past ne Beste come-past
expected available: Neither Ali nor Beste came. (no-NC possible)
- b. Ne [Ali <*gel-me-di*>] ne [Beste gel-me-di].
ne Ali come-neg-past ne Beste come-neg-past
- i. *expected unavailable*: Neither Ali nor Beste came. (NC impossible)
- ii. *expected available*: Neither Ali nor Beste didn't come. (DN possible)

Interestingly, the claim that there is no NC with clausal coordination only holds for bound morpheme *-mA*. For some speakers (but not all), clausal coordination with copular *değil* instead seems to yield NC, and does not have a double negation reading.

- (27) a. Ne hasta değil-im ne yorgun değil-im.
ne sick cop.neg-1sg ne tired cop.neg-1sg
I am neither sick nor tired.
- b. Ne dans ed-ecek değil-im ne şarkı söyle-yecek değil-im.
ne dance do-fut cop.neg-1sg ne song say-fut cop.neg-1sg
I will neither dance nor sing.

For these reasons, I formulate the generalization only in terms of sentential negation bound morpheme *-mA*, and I leave the analysis of *değil* for further work.

In the next section, I will argue for the converse of this claim, namely that all cases of DP *ne..ne* coordination have obligatory NC with *-mA*.

3.1.3 When *ne..ne* coordinates non-propositional elements, there is NC

In order to argue that cases of non-tensed clausal coordination have obligatory NC with sentential negation, I will concentrate on unambiguous cases of DP coordination, and show NC with sentential negation is obligatory. Unambiguous cases of DP coordinations will be built in two different ways: by “backgrounding” them (by rightward movement), and targeting them with focus-sensitive operators.

Backgrounding. Constituents can be “backgrounded” by being placed post-verbally. I assume the analysis proposed by Kornfilt (2005); Kural (1992, 1997), in which the constituents are generated in a verb-final structure, and moved rightward.

Backgrounding *ne..ne* phrases is possible, but only when the sentential negation marker is present. Moreover, in such cases, the only possible reading is one with NC, i.e. there is no double negation reading (in contrast with corresponding non-backgrounded *ne..ne* sentences such as (5b)).

- (28) a. Gel-me-di, ne Ali ne Beste.
 come-neg-past, ne Ali ne Beste
 They didn’t come, neither Ali nor Beste.
 (no DN reading, i.e. only NC available)
- b. *Gel-di, ne Ali ne Beste.
 come-past, ne Ali ne Beste

This contrast suggests that the *ne..ne* phrase is a constituent in the NC sentence (28a), but not in the non-NC sentence (28b). This is compatible with a theory in which the *ne..ne* phrase in (28a) is a coordination of DPs, and in (28b), it is a coordination of TPs, where the verb is elided in its first constituent. This data therefore provides support for the proposal in which DP-sized *ne..ne* phrases must engage in NC with sentential negation, while TP-sized *ne..ne* sentences cannot.

Note that this point entails that backward gapping with clausal *ne..ne* phrases is only possible if there is ellipsis of the verb in the first coordinand (Ross, 1970), but not RNR (Hankamer, 1979; Kornfilt, 2012, 2019). If the verb had undergone RNR in (28b), then ‘ne Ali ne Beste’ would be a constituent (with traces of the verb in both coordinands), and could therefore undergo backgrounding. However, since the resulting string is ungrammatical, this operation must be unavailable.¹¹

While this rightward movement works as a constituency test, leftward movements from scrambling, or pseudo-clefting, are not reliable constituency tests for coordination structures in Turkish, because they are compatible with ellipsis, as I show below. Sentence (29a) shows a fronted object *ne..ne* phrase. While this can be a case of an object *ne..ne* phrase that moves above the subject, it can also be analyzed as clausal

¹¹ This does not entail that RNR is unavailable altogether. In fact, at least for some speakers, subject-object coordinations can be backgrounded, which is only possible if the verb has undergone RNR.

- (1) DÜN ye-di, hem Sibel elma hem Merve portakal.
 yesterday eat-past and Sibel apple and Merve orange
 Yesterday, both Sibel ate an apple and Merve an orange.

coordination, in which each object DP moved clause internally, i.e. inside each coordinand. The subject and verb, being non-contrastive, are then elided in the first coordinand. We can check that such a structure is indeed possible by keeping the material overt in the first coordinand, as in (29b).¹²

- (29) a. Ne elma-yı <Canan ye-di> ne portakal-ı Canan ye-di.
 ne apple-acc Canan eat-past ne orange-acc Canan eat-past
 Neither the apple nor the orange Canan ate.
- b. Ne elma-yı Canan ye-di ne portakal-ı (Canan ye-di).
 ne apple-acc Canan eat-past ne orange-acc Canan eat-past
 Neither the apple nor the orange Canan ate.

Focus-sensitive operators. For some speakers, *ne..ne* phrases can be targeted by focus-sensitive operators such as *only* and *even*. When they are, there must be NC.

The following minimal pair reveals the effect of the presence of *sadece* ('only') applied to the *ne..ne* phrase.

- (30) a. Ispanağ-ı ne Ali ne Beste ye-(me)-di.
 spinach-acc ne Ali ne Beste eat-(neg)-past
 Neither Ali nor Beste ate the spinach.
- b. %Ispanağ-ı sadece ne Ali ne Beste ye-*(me)-di.
 spinach-acc only ne Ali ne Beste eat-*(neg)-past
lit. Only neither Ali nor Beste ate the spinach.
 Only Ali and Beste didn't eat spinach.

Turkish *sadece* associates with a focused constituent to its immediate right. In particular, in sentence (30b), *sadece* is targeting the *ne..ne* DP phrase (and not the whole sentence, since the object is extracted out of it). Therefore, the *ne..ne* phrase must be a constituent. And in this case, negation *-mA* must appear on the verb, in contrast with (30a).

Another example in the same vein involves the focus-sensitive particle *bile* ('even'). In Turkish, *bile* ('even') attaches directly to the right of the targeted constituent. Therefore, for the string 'ne Ali ne Beste bile gel(me)di', there are two attachment possibilities: either it attaches to the whole *ne..ne* phrase, or to the second member only ("Beste"). The resulting meanings are different: the first case presupposes that it was likely that both Ali and Beste would come, while the second presupposes that it was likely Beste would come. I presented both contexts to native speakers, and tested the felicity of the presence and absence of NC. Below are the results.

- (31) *Context: Both Ali and Beste had not missed a single party, and were both equally very likely to come to this one. In the end, however, very few people came, not even them.*

¹² An anonymous reviewer suggests a different structure for sentence (29b) with ellipsis in the second coordinand, where each *ne..* is a separate constituent. One is topicalized, and the other moves rightward for backgrounding purposes. I do not pursue a non-coordination analysis for *ne..ne* phrases in this paper, so I leave exploring this suggestion for future work.

% Ne Ali ne Beste bile gel-*(me)-di.
 ne Ali ne Beste even come-*(neg)-past
 Even Ali and Beste didn't come.

- (32) *Context: It was unclear whether Ali would come to the party, but Beste was very likely to come. In the end, however, neither Ali, nor even Beste came.*

% Ne Ali ne Beste bile gel-(me)-di.
 ne Ali ne Beste even come-(neg)-past
 Neither Ali nor even Beste came.

The first context is the one in which *bile* attaches to the whole *ne..ne* phrase, that therefore must be a constituent on its own. The sentential negation marker is obligatory, corroborating the claim that NC is obligatory with non-clausal *ne..ne* phrases. The second context is the one in which *bile* attaches to *Beste* only, therefore leaving the syntax of the *ne..ne* phrase ambiguous between DP or clausal coordination. In this case, the sentential negation marker is optional, thus correlating with the ambiguous constituency of the coordination.

In this section, I have given evidence that whenever the *ne..ne* phrase is forced to be a DP coordination, i.e. when it is backgrounded (moved rightward) or targeted by a focus-sensitive operator, there is NC with sentential negation. Note that these two tests contrast in the information-structural status of the *ne..ne* phrase: when it is backgrounded, it is given, while when it is targeted by a focus-sensitive operator, it is focussed. These facts go against an alternative proposal for the optionality of NC with *ne..ne* phrases as having some dependence on focus, proposed by Şener and İşsever (2003). A more complete argument against this proposal is given in section 5.1.

3.1.4 An argument from semantic scope

The proposal that *ne..ne* with and without NC depends on the size of the coordination predicts different facts about the scope of *ne..ne* with respect to operators in the verbal complex.

If *ne..ne* coordinates clauses, it contains the verbal complex, and therefore its negation should scope above anything in it. This prediction is borne out. I use the possibility modal morpheme *-Abil*, for its clear scope-taking properties, and its ability to scope above and below negation following morpheme order in regular negated sentences (when it take scope below, it is realized as *-A*), as shown in (33).

- (33) a. Duygu gel-me-yebil-ecek.
 Duygu come-neg-poss-fut
 Duygu will be able to not come. $\diamond > \neg$
 b. Duygu gel-e-me-yecek.
 Duygu come-poss-neg-fut
 Duygu will not be able to come. $\neg > \diamond$

When this modal occurs with a *ne..ne* phrase without NC with sentential negation, it unambiguously scopes below. This is shown below in (35).

- (34) a. Ne Duygu ne Mine gel-ebil-ecek.
 ne Duygu ne Mine come-poss-fut
 i. Neither Duygu nor Mine are allowed to come. $\neg > \diamond$
 ii. *It can be the case that neither Duygu nor Mine will come. $*\diamond > \neg$
- b. Ne Duygu ne Mine-yi davet ed-ebil-ir-sin.
 ne Duygu ne Mine-acc invite do-poss-aor-2s
 i. You cannot invite Duygu or Mine. $\neg > \diamond$
 ii. *You are allowed to not invite Duygu or Mine. $*\diamond > \neg$

This data is strongly suggestive of an obligatory clausal coordination structure. If *ne..ne* could be a non-clausal coordination in this example, we would expect it to be able to scope below the modal, just like other similar non-*ne..ne* coordination structures. I show that indeed, *ya..ya* disjunctions, which are taken to be ambiguous between clausal and non-clausal, can scope above and below the modal. A disjunction under a modal is predicted to have a free choice inference, while a disjunction scoping above a modal has an ignorance inference. Both readings are attested.

- (35) Ya Duygu ya Mine gel-ebil-ecek.
 or Duygu or Mine come-poss-fut
- a. Duygu can come and Mine can come.
 (Free Choice inference arising from $\diamond > \vee$)
- b. Either Duygu can come or Mine can come, but I don't remember which is true.
 (Ignorance inference arising from $\vee > \diamond$)

Now, turning to *ne..ne* phrases with NC, the proposal that they are non-clausal predicts potentially different scopes with respect to the verbal complex, with the additional effect of agreeing with a sentential negation marker. In general, the presence of a sentential negation fixes the scope of negation and the modal according to the morpheme order, just like in the basic examples in (33), but also in examples with quantifier NCIs like in (36).

- (36) a. Hiçkimse gel-me-yebil-ecek.
 nobody come-neg-poss-fut
 i. *Nobody can come. $\neg > \diamond$
 ii. It can be the case that nobody will come. $\diamond > \neg$
- b. Hiçkimse gel-e-me-yecek.
 nobody come-poss-neg-fut
 i. Nobody can come. $\neg > \diamond$
 ii. *It can be the case that nobody will come. $\diamond > \neg$

We observe the same pattern with *ne..ne* phrases with NC, where the scope of negation and the modal is similarly determined by the morpheme order.

- (37) a. Ne Duygu ne Mine gel-me-yebil-ecek.
 ne Duygu ne Mine come-neg-poss-fut

- i. *Neither Duygu nor Mine can come. $\neg > \diamond$
- ii. It can be the case that neither Duygu nor Mine will come. $\diamond > \neg$
- b. Ne Duygu ne Mine gel-e-me-yecek.
ne Duygu ne Mine come-poss-neg-fut
 - i. Neither Duygu nor Mine can come. $\neg > \diamond$
 - ii. *It can be the case that neither Duygu nor Mine will come. $\diamond > \neg$

To conclude, the clausal/non-clausal analysis of *ne..ne* sentences without and with NC correctly predicts scope with respect to a modal in the verbal complex: when there is no NC, only clausal coordination, and therefore wide scope of negation with respect to the modal, is predicted to be available, which is what we observe; when there is NC, scope is predicted to be the same as when there is NC with a quantifier NCI, i.e. it is determined by the order of the sentential negation marker with respect to the modal morpheme, which is also what we observe.

3.1.5 Prosodic structure of *ne..ne* sentences with and without NC

In this section I show that the prosodic structure associated with *ne..ne* sentences provides additional support for the correlation between NC and the clausality of the *ne..ne* phrase. In particular, I show that sentences with and without NC have a different prosody, and then I argue that this different prosody underlies different syntactic constituency structures, namely clausal vs. non-clausal coordinations.

I first summarize the main data points that were collected on the prosody of *ne..ne* phrases in (38) and (39). Brackets indicate relevant prosodic units.

- (38) Prosodic structure for *ne..ne* sentences without NC:
- a. [Ne Ali] [ne Beste gel-di].
 - b. [Ne Ali] [ne Beste gel-me-di]. *NC, ✓DN
- (39) Prosodic structures for *ne..ne* sentences with NC:
- a. [Ne Ali ne Beste] [gel-me-di]. ✓NC, *DN
 - b. [Ne Ali] [ne Beste] [gel-me-di]. ✓NC, *DN

The data in this section was obtained in several ways. The first is through direct observation of sentences produced by native speakers, where prosody between NC and no-NC *ne..ne* sentences is noticeably different. The second is through collection of grammaticality judgments and corresponding interpretations of *ne..ne* sentences with prosodic breaks inserted at various points, with hypotheses based on initial observed differences between the two types of *ne..ne* sentences. These introspective judgments were also checked in recordings obtained from two naive native speakers who were asked to read the relevant sentences and asked to comment on their interpretation. The recordings were imported into Praat and annotated following the intonational phonology system developed in Ipek (2015). In particular, the relevant phrases to be annotated were Ipek's 'intermediate phrases', i.e. prosodic units bigger

than a prosodic word, but smaller than the intonational unit formed by the entire sentence.¹³ Right edges of intermediate phrases are marked by a high tone (H- or LH-), and sometimes a prosodic break.¹⁴

We observe that the intermediate phrase boundaries differ between *ne..ne* sentences with and without NC. In particular, as shown in (38), in *ne..ne* sentences without NC, the first coordinand forms a prosodic unit, marked by a boundary tone at its right edge, and the rest of the sentence, i.e. the second (overt) coordinand and the remaining phonological material form another prosodic unit. In contrast, *ne..ne* sentences with NC, shown in (39), are characterized by a strong boundary tone and prosodic break at the edge of the overt coordination, and optionally, a boundary tone after the first coordinand, as in (39b) (reported by one speaker to be more marked).

These prosodic structures robustly correspond to no-NC and NC *ne..ne* sentences. Mixing them up is not possible: if the prosodic structures specific to NC sentences are applied to strings without sentential negation, as shown in (40), the utterances are judged to be bad. Conversely, if the prosody specific to no-NC sentences is used in a *ne..ne* sentence with sentential negation, as represented in (41), only the double negation reading, not the NC reading, is available.

(40) a. *[Ne Ali ne Beste] [gel-di].

b. *[Ne Ali] [ne Beste] [gel-di].

(41) [Ne Ali] [ne Beste gel-me-di].

✓DN, *NC

This final data point in (41) is particularly revealing, because it removes the confound that the presence of the sentential negation marker alone affects the prosody of the *ne..ne* sentence (an effect that is nevertheless present from *-mA* being a pre-stressing suffix, as discussed in a later section 5.1.3). Instead, it becomes clear that the prosodic structure correlates with the presence or absence of NC, whether the verb be negated or not.

The prosodic data and associated NC facts can be summarized as follows.

(42) **Prosodic structure of *ne..ne* sentences:**

a. In no-NC *ne..ne* sentences, the second member of the overt coordination forms a prosodic unit with the verb;

b. In NC *ne..ne* sentences, the second member of the overt coordination does not form a prosodic unit with the verb, and can form a prosodic unit with the first coordinand.

I argue that this prosodic generalization underlies the syntactic constituency structure of these sentences. In fact, Ipek (2015), in her study of intermediate prosodic phrases, makes the generalization that these phrases correspond to certain syntactic

¹³ Ipek identifies three levels of prosodic units in Turkish: the prosodic word, the intermediate phrase and the intonation phrase. The intonation phrase roughly corresponds to a full sentence, a prosodic word is associated with each content word, while the intermediate phrases, are intermediate prosodic units that correspond to syntactic phrases.

¹⁴ I received help for these annotations from a native speaker linguist knowledgeable in Turkish intonational phonology, before the theory presented in this paper was fully developed.

constituents. More broadly, the correspondance between prosodic and syntactic constituency can be captured by Selkirk's (2011) constraint *Prosody-to-Syntax Match* (in an Optimality Theory framework (Prince & Smolensky, 1993)), that states that "the left and right edges of a prosodic constituent must correspond to the left and right edges of a syntactic constituent." Therefore, given the assumption that prosodic units correspond to syntactic ones in these configurations, the set of prosodic facts summarized in (42) provides direct support for the proposed generalization in (12). Indeed, if the second member of the *ne..ne* phrase forms a prosodic constituent with the verb, then it forms a syntactic constituent, which corresponds to a clause, and therefore the entire coordination must be clausal.¹⁵ When the second coordinand forms a prosodic unit with the first, then the entire overt *ne..ne* phrase is a syntactic constituent, which is incompatible with clausal coordination.

In what follows, I give additional evidence that prosodic units correspond to clausal or non-clausal syntactic constituents in the case of coordination structures. I do so by checking the prosodic facts in non-*ne..ne* coordinations, against a reliable test for clausal coordination: coordinations of subject-object strings, which must be a result of backward gapping. In simple disjunction cases, both clausal and non-clausal coordination are presumed to be possible, and therefore different prosodic structures are predicted to be available. And indeed, all three prosodic structures, corresponding to constituent and clausal coordination, can be used, as shown in (43). The following data was collected from consultants' introspective judgments only.

- (43) a. ✓ [Ya Ali] [ya Beste (portakal-ı) ye-di].
 or Ali or Beste (orange-acc) ate
 Either Ali or Beste ate (the orange).
 b. ✓ [Ya Ali ya Beste] [(portakal-ı) yedi].
 or Ali or Beste (orange-acc) ate
 Either Ali or Beste ate (the orange).
 c. ✓ [Ya Ali] [ya Beste] [(portakal-ı) yedi].
 or Ali or Beste (orange-acc) ate
 Either Ali or Beste ate (the orange).

On the other hand, in subject-object coordinations, only the prosodic structure associated with clausal coordination is possible, as seen in (44).¹⁶

- (44) a. ✓ [Ya Ali elma-yı] [ya Beste portakal-ı yedi].
 or Ali apple-acc or Beste orange-acc ate
 Either Ali ate the apple or Beste the orange.

¹⁵ An anonymous reviewer notes that the prosodic boundary between the two *ne*-constituents in clausal coordinations, as in (38), should correspond to that separating intonation phrases rather than intermediate phrases, since it is separating two clauses. However, the boundary has properties of an intermediate phrase. This could be due to the interaction with the prosody of coordinations; a full exploration of the phenomenon is beyond the scope of this paper.

¹⁶ This data suggests that backward gapping in these cases is a result of ellipsis, and not RNR, where the subject-object coordination structure is an available constituent. This stands in conflict with the data in footnote 11, in which backgrounding of a subject-object string coordination is only possible if RNR is possible. This might suggest that ellipsis is the preferred strategy, given a particular string, but RNR is possible as a last resort.

- b. ?? [Ya Ali elmayı ya Beste portakal-ı] [yedi].
 or Ali apple-acc or Beste orange-acc ate
- c. ?? [Ya Ali elmayı] [ya Beste portakal-ı] [yedi].
 or Ali apple-acc or Beste orange-acc ate

This result with *ya..ya* phrases provides support for the claim that prosodic constituency encodes the (non-)clausal nature of Turkish coordinations. In conclusion, the differences in prosody of *ne..ne* phrases with and those without NC supply additional evidence for the correlation of the presence of NC and the non-clausality of the *ne..ne* coordination.

3.1.6 Interim conclusion

In this section, I argued for the proposal that states that the absence of NC in *ne..ne* sentences strictly correlates with *ne..ne* coordination of tensed clauses, and the presence of NC in *ne..ne* sentences with non-tensed clausal *ne..ne* coordination. I gave evidence from different configurations forcing clausal coordination, namely overt coordination of clauses and unambiguous forward and backward gapping structures, and from configurations forcing non-clausal coordinations, namely backgrounding and targeting by focus-sensitive operators. I also gave an argument from semantic scope, based on the fact that a clausal coordinator must scope above elements in a verbal complex, but a non-clausal coordinator may scope in different positions. Finally, I argue that the different prosodic structure of *ne..ne* phrases without and with NC is revealing of their underlying constituency structure. This allows us to conclude that whenever there is apparent optional NC (as e.g. (2)), it can in fact be reduced to a structural ambiguity: when there is no NC, coordination is clausal, and when there is NC, coordination is non-clausal.

This proposal contrasts with an alternative proposal for the optionality of NC with *ne..ne* phrases as dependent on focus, as argued by Şener & İşsever (2003). See section 5.1 for my arguments against this proposal.

The analysis presented in this paper crucially relies on the availability of the type-flexibility of coordinators. It is thus incompatible with conjunction reduction analyses, i.e. accounts of coordination that argue for obligatorily clausal coordination (Hirsch, 2017; Schein, 2017).¹⁷ In other words, it must assume operators that can

¹⁷ An alternative approach could save the obligatory clausal coordination view while maintaining the observed constituency structure of *ne..ne* phrases with NC, where they are analyzed as bi-clausal, inspired by the Ott and de Vries (2014) analysis for right-dislocation. A *ne..ne* sentence could have a structure of the type [ne [Ali *geldi*] ne [Beste *geldi*]] [*pro* *gelmedi*], where NC would be derived simply by having interpreted negation on both clauses (which are outside the scope of each other). The availability of this structure would have significant consequences: *ne..ne* phrases would be negative, and coordination operators could have a rigid type. However, there is reason to believe that such a structure is not possible. If it were, we would also expect that coordinations of subject-object complexes, such as (24)-(25), can occur with NC, by attributing them a structure of the type [ne [S₁ O₁ V] ne [S₂ O₂ V]][*pro pro* V-neg]. However, NC is not observed in these examples. Furthermore, there is independent evidence that there is nothing banning this more complex double subject-object pro-drop (with two antecedents each) needed in this structure; we find it licensed in comparable configurations, such as in the following:

- (1) A: Hem Ali balik hem Beste et yedi mi? B: Evet, (*pro pro*) yedi.
 and Ali fish and Beste meat ate Q yes ate

coordinate objects of different types, a view defended by Winter (1996) and Mitrović and Sauerland (2014), a.o. Nevertheless, as mentioned in section 2, speakers report that sentences with NC in *ne..ne* phrases are slightly more marked: does this indicate a general preference for clausal coordination? This is plausible from the perspective of the complexity of the semantic type, where coordination of constituents of type *t* is simpler than for other semantic types, that are argued to be derived by silent type-shifting, as in Winter (1996). This would mean that while conjunction reduction wouldn't be obligatory, it would still be preferred.

3.2 Hybridity in Turkish NC

In the previous section, I provided evidence for a generalization about the distribution of NC with a certain type of NCI – *ne..ne* phrases. It turns out we can extend the generalization to all NCIs. In particular, quantifier NCIs, as is well-known and claimed in section 2, always appear with NC in Turkish. Moreover, as generalized quantifiers, they never have a propositional semantic type. We can synthesize the distribution of NC with *-mA* with all Turkish NCIs in the following table:

	propositional	non-propositional
<i>ne..ne</i> phrases	no NC	NC
quantifier NCIs	n/a	NC

This distribution reveals a general dependence of the presence of NC on the NCI's semantic type, and we can naturally extend the generalization about *ne..ne* phrases to all Turkish NCIs:

(45) **Distribution of NC between sentential negation and NCIs**

- a. no NC \leftrightarrow the NCI's semantic type is propositional;
- b. NC \leftrightarrow the NCI's semantic type is non-propositional.

This distribution correlates with the relative position of the NCI and sentential negation, that is assumed to be merged above the vP, as suggested by the morpheme order. Non-propositional NCIs generally correspond to arguments of the verbs (that originate in the vP), including aspectual participial phrases that are arguments of the copula, which means they are c-commanded by negation, and thus can be licensed by it.¹⁸ In contrast, when the NCI is propositional (45a), its scope contains the NegP position and thus cannot be licensed by it. These facts will become relevant when I provide an analysis for the surface presence or absence of NC in the next section, 4.

This generalization stated in terms of semantic type is the crux of the paper. It reveals that *ne..ne* phrases and quantifier NCIs can be unified in their behavior by appealing to their semantic type. The apparent optionality of NC with *ne..ne* phrases is

A: Did both Ali eat fish and Beste meat? B: Yes, they did (eat that).

Therefore, this bi-clausal structure must be more generally unavailable for coordination structures.

¹⁸ The examples studied in this section crucially exclude potential NCIs that could originate above the NegP; see section 4.5.2 for a discussion of high adverbial *ne..ne* phrases.

a side-effect of the type-flexibility of coordination operators, together with the possibility of ellipsis, that allows a string with apparent DP coordination to be ambiguous between underlying DP coordination and clausal coordination. The hybridity in the Turkish NC system, i.e. the difference in NC behavior is due to the difference in the semantic types between quantifier NCIs and *ne..ne* phrases: while the latter may be of either propositional or non-propositional type, the former may only be of a non-propositional, generalized quantifier type.

4 Formal analysis

This section provides a formal analysis that accounts for the descriptive proposal presented in the previous section, in which the presence of NC with sentential negation depends on the semantic type of the NCI. In subsection 4.1, I present the analysis in a nutshell. In subsection 4.2, I give evidence for a disjunctive and existential semantics for *ne..ne* and generalized quantifier NCIs, that make it compatible with an agreement-based theory of NC (Zeijlstra, 2004, 2008). In subsection 4.3, I lay out my assumptions about the syntax of the various elements at play. In subsection 4.4, I give derivations for the basic set of facts that we set out to explain, i.e. the optionality and hybridity in Turkish NC, and check some predictions that the analysis makes. In subsection 4.5, I check some additional predictions of this analysis, namely how clausal and non-clausal *ne..ne* phrases interact with the licensing of other NCIs, how high NCI adverbials are licensed, and the scope of modals in *ne..ne* sentences.

4.1 The analysis in a nutshell

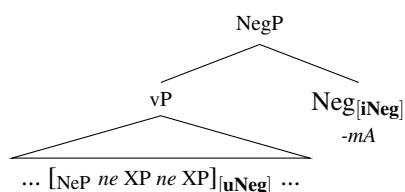
I give an analysis for Turkish NC embedded in the prominent framework for NC as syntactic agreement developed by Zeijlstra (2004, 2008). In this approach, NC is a syntactic Agree relation (Chomsky, 1995, 2001) between a single interpretable negative feature [iNeg] and one or more uninterpretable negative features [uNeg], using Multiple Agree (Hiraiwa, 2001). Negative feature checking is assumed to be upwards and phase-bound: probes bearing [uNeg] search for a c-commanding phasemate goal bearing [iNeg].¹⁹

Following Zeijlstra, I take Turkish to have the same basic building blocks as non-strict NC languages: NCIs are non-negative indefinites bearing [uNeg], the negation morpheme *-mA* is a head merged above the vP that carries [iNeg], and in addition, there is a higher null negation NegOp, an [iNeg]-carrying head merged above the CP, whose presence I assume is licensed only if [uNeg] are present on the clausal spine.

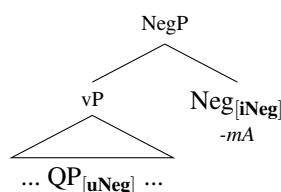
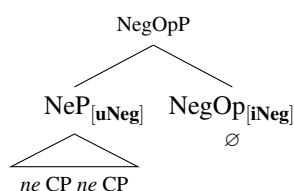
NCIs in Turkish include on the one hand typical quantifier NCIs, which I argue are existential quantifiers, and on the other, non-clausal and clausal *ne..ne* phrases, which I argue are disjunctions. Their [uNeg] features have to be checked off by c-commanding interpretable negative features [iNeg] present within a phase. NCIs originating in the vP – i.e. quantifier NCIs and non-clausal *ne..ne* phrases – move

¹⁹ See Deal (2021) for an account of NC in which probes and goals are switched, in order to fit NC in a standard downward agree architecture. The analysis in this paper can be translated accordingly.

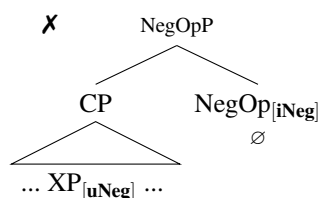
to spec,vP to get licensed by the Neg head *-mA*, as shown in (46) and (47). Clausal *ne..ne* phrases are not c-commanded by Neg and therefore cannot be licensed by it; therefore, they can only agree with NegOp, as shown in (48), whose presence is licensed by the NeP's [uNeg] being on the clausal spine. Finally, non-clausal NCIs are not on the clausal spine, and therefore, in the absence of other [uNeg] on the clausal spine, cannot be licensed by NegOp (even if they move to spec,CP, i.e. beyond the phase boundary), as shown in (49).

(46) Licensing non-clausal *ne..ne*

(47) Licensing quantifier NCIs

(48) Licensing clausal *ne..ne*

(49) NegOp not licensed without [uNeg] on the clausal spine



This analysis thus captures the generalization uncovered in section 3: non-clausal NCIs (i.e. non-clausal *ne..ne* phrases and quantifier NCIs) always engage in NC with a sentential negation marker, while clausal NCIs (i.e. clausal *ne..ne* phrases) never do.

4.2 Motivating semantic assumptions: Turkish NCIs are non-negative and existential/disjunctive

In this section, I argue for a non-negative, existential/disjunctive semantics for generalized quantifier NCIs and *ne..ne* phrases.

There are two equivalent options for the logical form of the NCIs that give the desired meaning. For quantifier NCIs, they are either existentials that scope below a negation ($\neg > \exists$) or universals that scope above ($\forall > \neg$). For *ne..ne* phrases, they are either disjunctions scoping below a negation ($\neg > \vee$), or conjunctions scoping above ($\wedge > \neg$). I will argue for both types of NCIs to be existential/disjunctive scoping below a negation. It is important to distinguish between the two possible LFs, because it impacts the relative position of the quantifier/connective with respect to negation, which is crucial to determining the agreement relationship. Furthermore, we can't

rely on cross-linguistic uniformity in choosing the relevant LF: the growing literature on this topic suggests that languages can employ either strategy.²⁰

In addition to arguing for an existential/disjunctive semantics for Turkish NCIs, I will argue that they are underlyingly non-negative elements, which provides support for an agreement analysis of NC, where the co-occurring negative semantics is ensured by the NCI's need to be licensed by a c-commanding semantic negation.

4.2.1 Turkish quantifier NCIs as semantically non-negative existentials

Existential quantifiers. I analyze Turkish quantifier NCIs as underlyingly existential quantifiers, that scope below negation, as opposed to universal quantifiers, that scope above negation. First, existential semantics is suggested by the morphology of NCIs of the type “no NP”, that are realized as “hiçbir NP”, where the element “hiçbir” is composed of *hiç*, “ever”, and *bir*, “one”. This means that these words are at least historically existential quantifiers. Second, there is evidence in which the scope of the negation and the existential quantifier is split by another quantificational element. I use the well-known observation that negative quantifiers cross-linguistically can be interpreted *de dicto* (i.e. narrow scope with respect to an intensional operator) in presence of a modal (De Swart, 2000; Geurts, 1996; Jacobs, 1980; Penka, 2011; Penka & Zeijlstra, 2005; Potts, 2000, a.o.), that itself must be interpreted under negation.²¹

- (50) Buraya hiçbirşey siğ-a-ma-z.
 here-dir nothing fit-can-neg-3sg
 Nothing can fit in here.
 a. *Everything present is too big for the space.* *de re:* $\neg > \exists > \diamond$
 b. *The space is too small to fit any potential thing.* *de dicto:* $\neg > \diamond > \exists$
- (51) Hiçkimse-yle konuş-mak zorunda değil-sin.
 nobody-with talk-inf need cop.neg-2s
 You don't have to talk to anyone.
 a. *Everyone present is such that you don't have to talk to them.*
de re: $\neg > \exists > \square$
 b. *There is no obligation to talk to any potential human.*
de dicto: $\neg > \square > \exists$

The sentences in (50)-(51) easily have *de dicto* quantification over things or persons, i.e. under the modal (if it were above the modal, they would only refer to real-world things or persons in a relevant domain). Furthermore, the negation must find itself above the modal verb, therefore, if the quantifier Q scopes below the modal M ,

²⁰ Here are a few studies addressing the question of the nature of negative quantifiers/connectives: Giannakidou (2000) (universals in Greek); Shimoyama (2011) (universals in Japanese); De Swart (2000); Penka (2011, 2012); Potts (2000, a.o.) (existentials in German and English); Gonzalez and Demirdache (2015) (conjunction in French); Gajić (2016) (disjunction in BCS); Wurmbrand (2008) (conjunction in English).

²¹ Note that Abels and Martí (2010) provide a different analysis for these apparent split scope readings, in which there is an existential quantifier over choice functions scoping above the modal: this does not affect the analysis of our NCIs as existential quantifiers.

the only scopal configuration of these three elements capable of conveying the relevant reading is the following: $\neg > M > Q$. Since Q scopes below negation, it must be an existential quantifier, and not a universal.

Non-negative. As noted by Kelepir (1999), Turkish quantifier NCIs never yield double negation readings. We can see this when interacting with sentential negation, whether or not there are several NCIs in the sentence. Moreover, for some speakers, NCIs can be licensed by the suffix *-sIz* (“without”) (one of the only configurations where Turkish NCIs appear without sentential negation) that we would expect has a negative semantics of its own; again, no double negation reading is available.

- (52) Hiçkimse gel-me-di.
nobody come-neg-past
Nobody came. *Everybody came.
- (53) Hiçkimse hiçbirşey-i gör-me-di.
Nobody nothing-acc see-neg-past
No-one saw anything. *Everyone saw something.
- (54) %Parti-yi hiçkimse-siz yap-tı-m.
party-acc nobody-without do-past-1sg
I organized this party without anyone. *I organized this party with everyone.

This evidence suggests that NCIs are inherently non-negative, as standard agreement-based analyses of NC generally assume.

4.2.2 *Ne..ne* phrases as non-negative disjunctions

Disjunctions. I show that *ne..ne* phrases are disjunctions scoping under negation, by looking at the interaction of *ne..ne* phrases with the “without” suffix *-sIz*, that licenses NCIs (as in (54)). Like with sentential negation, there is both an NC and a double negation reading, as shown in the following sentence.

- (55) %Bu parti ne Ali ne Beste-siz yap-ıl-acak.
this party ne Ali ne Beste-without do-pass-fut
- a. %This party will be organized without Ali or Beste.
(Context: *Ali and Beste are unfortunately not coming to the party. You are sad about it, but you accept it.*)
- b. %This party will not be organized without Ali or Beste.
(Context: *Ali and Beste still haven't responded whether they're coming to the party. But you don't want to have the party without them.*)

I will use the judgments of speakers who access both readings as a diagnostic for the underlying semantics of *ne..ne*.²²

²² Some notes about the judgments for this sentence. Speakers vary in which readings they access: some speakers accept only (a), some only (b), some both, some neither. The availability of reading (a) is further evidence for *-sIz* as a NCI licenser, in fact correlates with speakers' acceptance of *-sIz* as an NCI licenser

Given the NC reading in (a), the phrase “ne Ali ne Beste-siz” may have one of the two following equivalent logical representations, depending on whether *ne..ne* is underlyingly a disjunction or a conjunction:²³

- (56) $[[ne\ Ali\ ne\ Beste-siz]_{NC}]$
 a. **disjunctive:** WITHOUT (Ali OR Beste)
 b. **conjunctive:** (WITHOUT Ali) AND (WITHOUT Beste)

I argue that the correct logical form for the NC reading of (55) is the disjunctive LF in (56a). Let us consider the conjunctive LF as a possibility. In (56b), WITHOUT is interpreted twice, once on each conjunct. If this were the correct LF, the underlying syntactic form of (56) must have *-sIz* twice on each conjunct, with its first occurrence elided. Given that ellipsis is generally optional in coordinate structures, we would expect an overt first occurrence of *-sIz* to not affect the availability of the NC reading. However, it does: when *-sIz* appears overtly on each coordinand, the NC reading is not recovered, and only a double negation reading is available, as shown in (57).

- (57) Bu parti ne Ali-siz ne Beste-siz yap-ıl-acak.
 this party ne Ali-without ne Beste-without do-pass-fut
 a. *This party will be organized without Ali and (without) Beste.
 b. This party will not be organized without Ali and (without) Beste.

This result suggests that the conjunctive LF (56b) does not underly the NC reading in (55a). Instead, the disjunctive LF (56a) is correct: there is no ellipsis of *-sIz*; instead, a unique *-sIz* scopes over the entire *ne..ne* phrase. Moreover, this disjunctive LF immediately predicts the obligatory double negation reading of (57), that would correspond to NOT [(WITHOUT Ali) OR (WITHOUT Beste)]. This LF would also underly the double negation reading of (55), with ellipsis of the first *-sIz*.

This result permits a unified analysis of *ne..ne* phrases and quantifier NCIs, in which they can both scope under negation, allowing Zeijlstra’s agreement theory to apply, as long as *ne..ne* is indeed non-negative.

Non-negative. I argue that *ne..ne* phrases are non-negative based on the results of section 3.1.3: in cases where *ne..ne* phrases are non-clausal, they must engage in NC with sentential negation. If they were negative, we would expect a double negation to be available as well. As for clausal *ne..ne* phrases, their non-negative nature follows from the assumption that the NE operator is the same in both clausal and non-clausal *ne..ne* phrases. An alternative analysis would make a distinction between clausal and non-clausal *ne..ne* phrases, and assume that clausal ones are negative, and non-clausal

at all, checked by examples like (54). The availability of reading (b) could come from whether speakers accept suspended affixation of *-sIz* with *ne..ne* coordinations (and interpreting it on both members), in which case the *ne..ne* phrase has to be licensed by a higher negation, yielding the double negation reading. Finally, ill-formedness is likely due to both of these factors simultaneously.

²³ A third possibility would be to have a non-Boolean sum operator under a negation. However, this option is not expected because *ne..ne* is obligatorily distributive, e.g. *ne Ali ne Beste birlikte(ler)*, ‘neither Ali nor Beste are together’ is infelicitous.

ones aren't. This would introduce some complexity in positing two different NE operators, but would reduce it in not having to posit an additional null negation operator in the syntax. While most of the data would be covered with this alternative analysis, it is unclear how pre-*ne..ne* NCIs (see (73)) would be licensed. Furthermore, several authors have argued for the presence of a null negation operator in various languages, as discussed in 4.3, so assuming its presence is rather innocuous, while assuming two different NE operators that differ in their negativity would be a dubious move.

Proposal: the NE operator. Based on the results of this section, I propose a NE operator, that is a generalized disjunction, whose lexical entry is found in (58) (adapted from Partee & Rooth, 1983; Winter, 1996).

$$(58) \quad \llbracket \text{NE} \rrbracket = \lambda \alpha \lambda \beta . \alpha \sqcup \beta$$

where:

- α and β are elements of the same type τ , where τ is t -reducible, i.e. $\tau = t$ or $\tau = \langle \tau_1, \tau_2 \rangle$, where τ_1 is any type and τ_2 is a t -reducible type
- \sqcup is generalized disjunction, defined as:

$$\sqcup_{\langle \tau, \langle \tau, \tau \rangle \rangle} = \begin{cases} \lambda x_{\tau} . \lambda y_{\tau} . x \vee y & \tau = t \\ \lambda x_{\tau} . \lambda y_{\tau} . \lambda z_{\tau_1} . x(z) \sqcup y(z) & \tau = \langle \tau_1, \tau_2 \rangle \end{cases}$$

As is typically assumed for coordination structures, e type individuals, denoting e.g. proper names, type-shift to a generalized quantifier type $\langle \langle e, t \rangle, t \rangle$ when combining with NE, that only composes with t -reducible types.

4.3 Syntactic assumptions

In this section, I lay out the key syntactic assumptions necessary for the analysis: the syntax of the negative operators, the domain of negative feature agreement and its consequences, and the syntax of NCIs.

4.3.1 The syntax of Turkish negations

I assume two syntactic positions for semantic negation operators. Both are heads and carry interpretable negative features [iNeg]. The first is the head of the NegP, uncontroversially merged above the vP, as the morpheme order suggests, and realized as the morpheme *-mA*. Another, that I call NegOp, is merged in a projection above the CP, and is null. The null NegOp is licensed only if there is a [uNeg] on the clausal spine.

The head status of the overt Turkish negation marker *-mA* is apparent from its fixed position in the sequence of suffixes present on the verbal complex. It can be further diagnosed by showing it does not pass the ‘*why not*’ test²⁴ (used by Zeijlstra (2004) who adopts it from Merchant (2001)), as shown in (59) (copular and existential

²⁴ Though the validity of this test for *-mA* is questioned, because it is a bound morpheme, as noted by an anonymous reviewer.

negations are verbal, so the test does not apply to them). In addition, neither *-mA* nor copular and existential negation markers are able to merge with other syntactic categories, e.g. DPs, as shown in (60).

- (59) *Neden me?
 why neg
int. Why not?
- (60) *{Herkes, çok, Ayşe} {değil, yok, -mA} (geldi.)
 {Everyone, many, Ayşe} {cop.neg, ex.neg, neg} (came.)
int. Not {everyone, many, Ayşe} (came.)

The idea that there are several projections for Turkish negation should not be surprising, as there is evidence from many languages for two or more positions for negation. In particular, many languages appear to have an overt high position for negation (see e.g. Korean (Loewen, 2007), Irish (McCloskey, 1979), Basque (Laka, 1990), a.o.). Furthermore, these two positions for negation proposed here essentially correspond to those proposed by Zeijlstra (2004) for non-strict NC languages: Italian, for example, has its overt sentential negation *non* that carries [iNeg], that is merged above the vP, and a null negation, that is merged above the TP. Thus, the [uNeg] features of post-verbal NCIs, that are in the c-command domain of *non*, can be checked off by its [iNeg] features, while pre-verbal NCIs, that, crucially, are not c-commanded by *non* in their surface position, agree with the null operator, as represented in (61).

- (61) a. [*non*_[iNeg]]_{[vP ...} [NCI_[uNeg]
 b. [NegOp_[iNeg]] [NCI_[uNeg]]_{[vP ...}

There are differences in the surface facts between Turkish and Italian, namely in the licensing of subject NCIs by sentential negation; I detail my assumptions about how Turkish subject NCIs are licensed in the following section.

4.3.2 Licensing domains

Following Kayabaşı and Özgen (2018) for Turkish and a general consensus on agreement domains, I adopt the assumption that negative feature agreement is phase-bound. I assume, as Chomsky (2008) argues and as is widely accepted, that CPs and vPs form phases. This means that only the edges of CPs and vPs are accessible to operations outside of them.

Evidence for negative feature agreement not crossing a CP boundary can be seen in what follows (such data is also discussed by Kayabaşı and Özgen (2018); Kornfilt (1984, 1997)). As in many NC languages, agreement of an NCI in an embedded CP by an extra-clausal negation is not possible, as exemplified in (62).

- (62) a. *_{[TP} Hiçkimse gel-di] diye gör-me-di-m.
 nobody come-past comp see-neg-past-1sg
int. I didn't see that anybody came.
- b. *_{[TP} Hiçkimse gel-di] değil.
 nobody come-past cop.neg
int. It's not the case that anyone came.

In contrast, (63) has examples in which the NCI *hiçkimse* in non-tensed clauses is licensed by a matrix negation. Below are examples from indicative (a) and subjunctive (b) nominalized clauses.

- (63) a. [*MoodP* Hiçkimse-nin gel-diğ-in]-i gör-me-di-m.
 nobody-gen come-nmz-3sg-acc see-neg-past-1sg
 I didn't see that anybody came.
- b. [*MoodP* Hiçkimse-nin gel-me-sin]-i iste-mi-yor-um.
 nobody-gen come-subj.nmz-3sg-acc want-neg-prog-1sg
 I don't want anybody to come.

It has been argued that Turkish nominalizations contain projections including and below MoodP (Borsley & Kornfilt, 2000; Kornfilt & Whitman, 2011), but don't contain the TP.²⁵ Thus, they don't contain the CP layer either. It is thus reasonable to conclude that negative feature agreement is possible as long as the negative dependency doesn't have to cross a CP boundary.

Evidence for negative feature agreement not crossing a vP boundary is less direct, and I mostly rely on the consensus that it is indeed a phase, and that agreement cannot cross it. However, I take that there is indirect evidence from the absence of scope splitting of negation and the NCI. Since the NegP is merged above the vP, the Neg head that carries [iNeg] may not license any [uNeg] within the vP. I adopt the proposal by Kayabaşı and Özgen (2018) that any NCI base-generated within the vP moves to spec,vP (forming several specifiers in cases of multiple NCIs). If no other projection can come in to host a quantifier in between NegP and vP, there is no space for another DP to come scope in between. This move therefore reflects the empirical generalization that we do not observe the scope of negation and the NCI's existential operator being split by other quantificational DPs in Turkish, and in NC languages more generally (as observed by St-Amour (2008), and reminiscent of Haegeman and Zanuttini's (1991) Neg-Criterion, that requires strict locality between negation and NCIs, and Linebarger's Immediate Scope Constraint for NPI licensing). It also explains why the scope can be split by root modals (as in (50)), whose projection is assumed to be found below sentential negation but above the vP.

Note that this entails that subject NCIs do not move to spec,TP, contra what is standardly assumed for subjects (Aygen, 2002; Kornfilt, 1984, 2001; Kural, 1993, a.o.), but in line with Öztürk (2002, 2005), who argues that subjects in Turkish may but need not raise to spec,TP. We therefore have a system in which NCIs must stay low to satisfy their licensing requirements, and other subjects may move to spec,TP, e.g. to receive a specificity reading. One still might wonder why subject NCIs cannot raise high enough (i.e. spec,CP) to be licensed by the higher NegOp. This is because NegOp is licensed only in presence of [uNeg] on the clausal spine. This assumption can thus serve as an explanation for the difference between Turkish and Italian: the Italian null operator can be licensed without [uNeg] on the clausal spine,

²⁵ To be precise, Borsley and Kornfilt (2000) do argue that there is a TP, that is low and defective, i.e. expressing only [\pm Future], in order to account for the possibility of the future morpheme *-(y)AcAK* to appear in these nominalizations. However, this is not the high TP that hosts 'real' tense. So equivalently, following Jendraschek (2011), the future morpheme *-(y)AcAK* is in fact introduced by AspP.

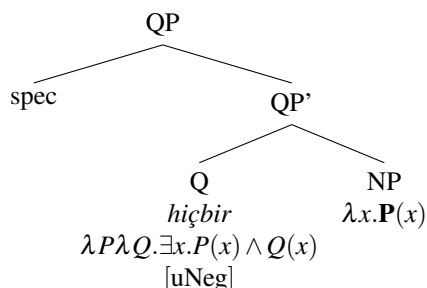
while its Turkish counterpart cannot. In Turkish, the only [uNeg]-carrying head on the clausal spine is the head of the NeP in the case of non-embedded *ne..ne* coordinations, i.e. clausal coordinations (see the following section 4.3.3 for the head status of the [uNeg]-carrying Ne operator). And we will see in section 4.5.1 that only in the presence of a clausal *ne..ne* phrase, and within reach of the NegOp, i.e. above the *ne..ne* phrase, can a quantifier NCI be licensed without the sentential negation marker. In consequence, the overt sentential negation marker Neg licenses all NCIs that are base-generated within the vP, which includes all quantifier NCIs and non-clausal *ne..ne* phrases. The only NCIs not in this domain are clausal *ne..ne* phrases, i.e. TP/CP coordinations. These NCIs will be licensed by the higher negation operator NegOp.²⁶

4.3.3 The internal syntax of NCIs

As argued in section 4.2, both quantifier NCIs and *ne..ne* phrases are non-negative. I adopt Zeijlstra's (2004) basic analysis for NCIs in NC languages, i.e. NCIs carry [uNeg] features.

I assume that quantifier NCIs are formed by a ([uNeg]-carrying) existential quantifier that combines with a NP (following Penka 2011, 2012). I adopt a standard syntax for quantifier phrases, in which the logical operator sits in its head, taking an NP in its complement.

(64) The internal syntax of a quantifier NCI²⁷

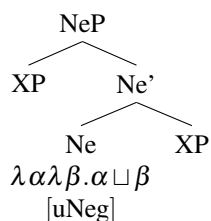


Just like quantifier NCIs, *ne..ne* phrases carry uninterpretable negative features [uNeg]. I assume a standard non-committal syntax of coordination, where the coordinands are in the specifier and argument of a NeP, and the NE operator is in the head of the NeP.

²⁶ If clausal *ne..ne* phrases are CP coordinations, there should be effects observed when negation takes scope above CPs, namely denial uses of negation (see in particular Repp (2006)). In fact, *ne..ne* phrases, and their counterparts in English and other languages, often convey the feeling of denying an expectation, therefore providing support for negation scoping above the CP. A possible prediction is that non-clausal *ne..ne* phrases cannot convey denial, so long as negation *-mA* cannot. This would constitute an involved empirical study that I leave for further work.

²⁷ I remain neutral as to head directionality in this structure. While Turkish is considered a head-final language, all quantifier expressions appear to the left of the DP they select, suggesting they are head-initial (see, e.g. Göksel & Kerslake, 2005; Kornfilt, 1997). A reviewer points out that this structure could be made head-final by analyzing the quantifiers as specifiers, with null heads hosting the relevant features.

(65) The internal syntax of a NeP



This structure could be shorthand for one proposed in Den Dikken (2006); Szabolcsi (2018b); I omit it from this discussion for the sake of simplicity, and because the choice of the analysis does not impact the analysis of *ne..ne*'s interaction with NC.²⁸

4.4 Combining the ingredients and deriving the data

In the following derivations, I assume extensional compositional semantics, ignoring tense. I also assume a head-final structure for the projections on the clausal spine.

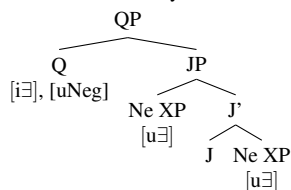
4.4.1 Licensing non-clausal NCIs

In this section, I show how non-clausal NCIs, namely non-clausal *ne..ne* phrases and quantifier NCIs, are licensed.

I derive the licensing of a DP *ne..ne* coordination in (66). The *ne..ne* coordination, here acting as a subject, originates in the specifier of the VP, and moves up to spec,VP to get licensed by the Neg head (for simplicity purposes, I ignore the predicate abstraction node).

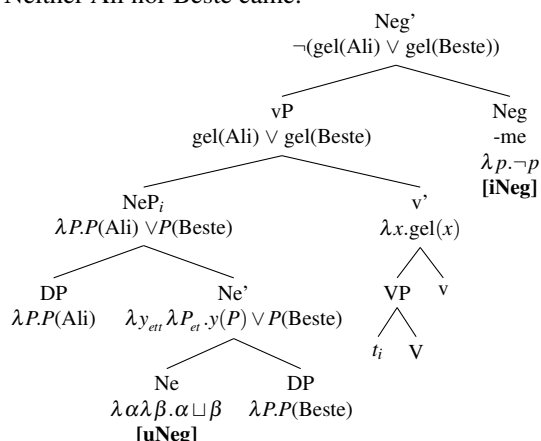
(66) [Ne Ali ne Beste] gel-me-di.
 ne Ali ne Beste come-neg-past

²⁸ In such an analysis, the NeP could be analyzed in the following way:



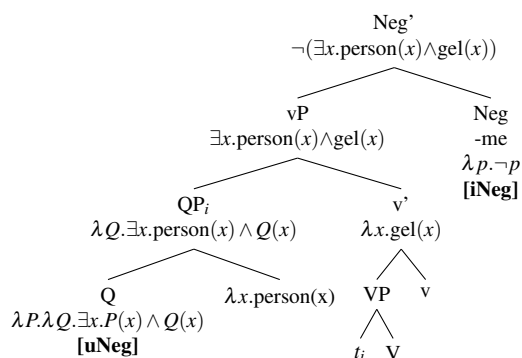
“Ne” would be a semantically vacuous, but would carry uninterpretable existential features, and thus call for a higher existential quantifier, and J would be a tuple forming operator, which hands over members of a set over which the existential quantifies. In fact, a similar analysis could be extended to quantifier NCIs, and then we could have one unique quantifier. But this does not affect the analysis presented in this paper.

Neither Ali nor Beste came.



In an identical way, I derive the licensing of a quantifier NCI in (67), where the quantifier NCI is in the same position as the *ne..ne* NCI. Again, the [uNeg] of the NCI is checked off by the [iNeg] of the Neg head, after it has undergone movement to spec,vP.

- (67) Hiçkimse gel-me-di.
 nobody come-neg-past
 Nobody came.



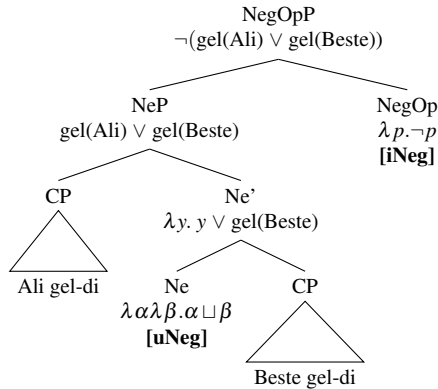
In both (66) and (67), the non-clausal NCI can only be grammatical if sentential negation is present. If it were absent, there would be no [iNeg] to check off the NCI's [uNeg]. The NegOp, merged above the CP, could not check off the negative features of the NCI (even if it were to move up to spec,CP), because the [uNeg] present in the structure are not on the clausal spine.

In this section, I have shown derivations that reveal the mechanism by which non-clausal *ne..ne* phrases and quantifier NCIs have a strict NC behavior, i.e. require the presence of a clausemate negation marker.

4.4.2 Licensing clausal NCIs

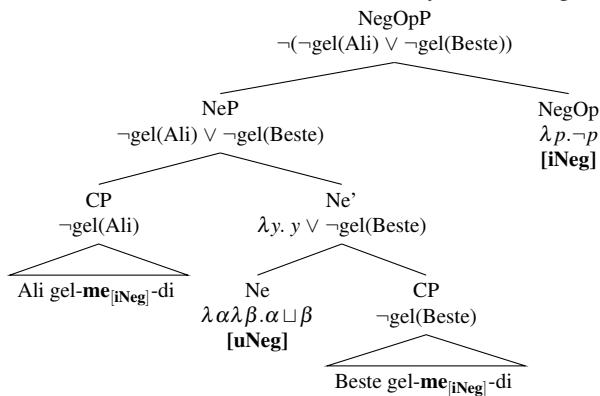
I show in (68) a derivation in which a clausal NCI is licensed. The NE operator selects for two CPs, and its [uNeg] is checked off by the [iNeg] of the NegOp, merged to the *ne..ne* coordination. The NegOp is licensed, because the [uNeg] of the NeP are on the clausal spine. Since the NegOp is null, there is no phonological realization of the semantic negation operator in this sentence.

- (68) Ne Ali <*gel-di*> ne Beste *gel-di*.
 ne Ali come-past ne Beste come-past
 Neither Ali nor Beste came.



The following derivation shows that sentential negation cannot license a clausal *ne..ne* phrase, since it does not c-command it. The only way for such a string to be grammatical is if an NegOp is merged to the NeP to check off its uninterpretable features. In this case, there are several semantically negative operators, one licensing the *ne..ne* phrase, and the other two appearing in each coordinand. This results in a double negation reading, as observed in the data.

- (69) Ne Ali <*gel-me-di*> ne Beste *gel-me-di*.
 ne Ali come-neg-past ne Beste come-neg-past
 Neither Ali nor Beste didn't come. (only DN reading)



4.5 Checking additional predictions

4.5.1 Licensing multiple NCIs

In this section, I discuss some additional data on sentences with multiple NCIs, specifically with a *ne..ne* phrase and another NCI (*ne..ne* or quantifier).

Quantifier NCIs are generally ungrammatical in the scope of *ne..ne* phrases, when a sentential negation marker is absent, as shown in the following examples.

- (70) a. Ne Ayşe ne Ali hiçkimse-yi gör-*(me)-di.
 ne Ayşe ne Ali nobody see-*(neg)-past
 Neither Ayşe nor Ali saw anyone.
- b. *Ne Ali hiçbirşey yapmak istiyor, ne Ayşe.
 ne Ali nothing do-inf want-ipf.3sg ne Ayşe
 int. Neither Ali wants to do anything, nor does Ayşe.

This data is predicted by the analysis proposed in this paper: quantifier NCIs cannot be licensed by NegOp, because the NCIs are separated from the NegOp by a CP boundary, and therefore agreement cannot occur. For agreement to occur, the NCI would have to move to a high enough position to be licensed by NegOp, e.g. spec,CP. However, in (70), this is not possible: the subjects of each coordinated clause (recall, the lack of NC on the verb entails clausal coordination) would have to move to an even higher position than spec,CP, which is predicted impossible by scope economy, because the subjects are scopally vacuous. For this reason, sentential negation is obligatory in (70a) to make the sentence grammatical (and licenses at once the non-clausal *ne..ne* phrase and the quantifier NCI). In (70b), sentential negation makes the sentence grammatical, but only with an NC reading, because of the obligatory clausal coordination.

In contrast, in cases in which NCIs themselves are overtly coordinated by *ne..ne*, the sentence without negation is acceptable.

- (71) Can ne hiçkimse-yi ne hiçbirşey-i gör-(me)-di.
 Can ne nobody-acc ne nothing-acc see-(neg)-past
 Can didn't see anyone or anything.

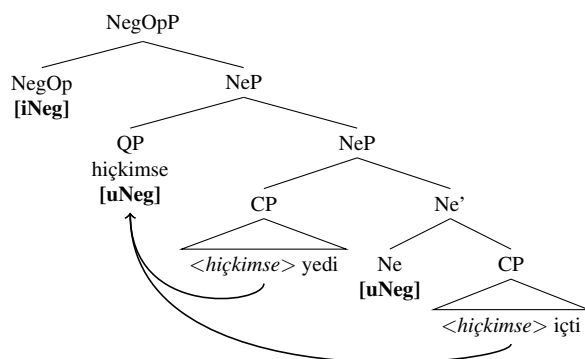
This can be explained if the NCIs have moved to spec,CP, a position in which they can agree with NegOp. In this sentence, the subject undergoes ATB movement out of the coordination.

Furthermore, quantifier NCIs are grammatical in front of a *ne..ne* phrase and without a sentential negation marker (for a majority of speakers). Examples with both subject and object quantifier NCIs are shown below.

- (72) a. Hiçkimse ne et ne balık ye-di.
 nobody NE meat NE fish eat-PAST
 Nobody ate meat or fish.
- b. Hiçbir sebze-yi ne Ali ne Beste ye-di.
 no vegetables-acc ne Ali ne Beste eat-past
 Neither Ali nor Beste ate any vegetables.

In order to explain this data, I assume that NCIs can raise to a position between the NegOpP and the NeP (e.g. by Chomsky adjunction to the NeP, or to a specifier of the NeP), and have their [uNeg] features checked there.

- (73) Hiçkimse ne ye-di ne iç-ti.
nobody ne eat-past ne drink-past



Examples (71)-(73) display configurations of quantifier NCIs agree with NegOp. They are exceptional in the sense that NegOp is generally not licensed in the presence of quantifier NCIs, because there are no [uNeg] on the clausal spine. But it is the presence of clausal *ne..ne* phrases that licensed the presence of NegOp, which then can license whichever NCI is present in its agreement domain.

Finally, several *ne..ne* phrases can be licensed at once, as in (74).

- (74) Ne Ali ne Beste ne et ne balık ye-di.
NE Ali NE Beste NE meat NE fish eat-PAST
Neither Ali nor Beste ate meat or fish.

The analysis proposed in (73) can then be identically applied to this example, where the first *ne..ne* phrase is non-clausal, and the second is clausal.

4.5.2 Licensing high NCI adverbials

The analysis proposed has an idiosyncrasy: no NCI that is above the NegP and below the CP could be licensed by a clausemate negation. In this section, I test the prediction that NCIs in such a position are impossible, and show that it appears to be borne out. One place to look for such NCIs is among high adverbials, e.g. of frequency, that are often said to scope above negation in various languages (Cinque, 1999; Potsdam, 1998, a.o). I first show what the scope of an example frequency adverb *nadiren* ‘rarely’ is with respect to sentential negation. It appears to have ambiguous scope with respect to negation when appearing in second position, as in (75a), but only high scope sentence-initially, as in (75b).²⁹

²⁹ The data in this section is completely replicable with epistemic modality adverbs, e.g. *kesinlikle*, ‘definitely’, and further on with *ne..ne* phrases, *ne kesinlikle ne muhtemelen*, ‘neither definitely nor probably’.

- (75) a. Esra nadiren et ye-m-iyor.
Esra rarely meat eat-neg-prog
i. Esra rarely does not eat meat. *rarely* > \neg
(*False if Esra eats meat for half of the meals*)
ii. Esra does not rarely eat meat. \neg > *rarely*
(*True if Esra eats meat for half of the meals*)
- b. Nadiren Esra et ye-m-iyor.
rarely Esra meat eat-neg-prog
i. Esra rarely does not eat meat. *rarely* > \neg
ii. *Unavailable*: Esra does not rarely eat meat. \neg > *rarely*

Adverbs are taken to be interpreted in the position in which they are base-generated: therefore, in (75b), *nadiren* is base-generated in a position above negation. This analysis makes a prediction, namely that an equivalent NCI adverb could not be licensed by sentential negation in that position. We can test this prediction by constructing an NCI frequency adverbial using a *ne..ne* phrase – *ne bazen ne sık sık* ‘neither sometimes nor often’, and check whether it can be licensed by sentential negation.

- (76) a. Ne bazen ne sık sık Esra et y-iyor.
ne sometimes ne often Esra meat eat-prog
Neither sometimes nor often, Esra eats meat.
(*she might eat it never or rarely, False if she eats it often*)
- b. Ne bazen ne sık sık Esra et ye-m-iyor.
ne sometimes ne often Esra meat eat-neg-prog
i. Neither sometimes nor often, Esra doesn’t eat meat. (DN)
(*True if she eats it often*)
ii. *Neither sometimes nor often, Esra eats meat. (NC)

The negative concord reading is not available in (76b), showing the *ne..ne* phrase cannot be licensed in that position, and the prediction is thus in fact borne out. I further note that placing the adverb after the subject allows for a negative concord reading (in addition to a double negation reading).³⁰

- (77) Esra ne bazen ne sık sık et ye-m-iyor.
Esra ne sometimes ne often meat eat-neg-prog
a. Neither sometimes nor often, Esra does not eat meat. (DN)
(*True if she eats it often*)

³⁰ A reviewer suggests making the subject a NCI to make sure it stays vP-internal. Such a sentence is grammatical, which suggests that the *ne..ne* phrase is below the vP-internal subject, and therefore indeed vP-internal itself.

- (1) Hiçkimse ne bazen ne sık sık et ye-m-iyor.
nobody ne sometimes ne often meat eat-neg-prog
No-one eats meat sometimes or often. (NC)

b. Esra eats meat neither sometimes nor often. (NC)

This means that the *ne..ne* phrase can be licensed by sentential negation in this post-subject position, which allows us to draw a parallel with the possibility for the adverb in (75a) to scope below negation. Therefore, the ability to be licensed by sentential negation correlates with the availability of narrow scope of the adverb with respect to negation. These findings suggest that there are two positions in which frequency adverbs can be base-generated and scope from: one below sentential negation and one above. When NCI adverbials are generated in the higher position, this means they cannot be licensed by sentential negation, and are presumably licensed by a higher NegOp (which yields a double negation reading in cases where sentential negation does appear).

However, since licensing cannot cross a CP boundary, these high *ne..ne* adverbials, if originating below C, must be instances of clausal coordination, so that the NegOp can license it. A generalized quantifier high NCI would thus be predicted to be ungrammatical in such a position. Unfortunately, however, among non-*ne..ne* NCIs, no such adverbs could be found, and therefore this prediction could not be tested.³¹

5 Alternative analyses for optional NC with *ne..ne* phrases

5.1 Dependence of NC on information structure: Şener and İşsever (2003)

In this section, I argue against the generalization put forth by Şener and İşsever (2003) on the dependence of NC with *ne..ne* phrases on information-structural focus. I first present evidence that shows that the generalization does not hold, at least for all the native speakers who were asked. I finish by discussing in what ways information structure nevertheless does interact with NC with *ne..ne* phrases, and how the clausality of the coordination structure itself plays a role.

Şener and İşsever (2003) propose an analysis for the optionality of NC with subject and object *ne..ne* phrases based on their interaction with focus, arguing for a dependency of focal and negative features, where semantic negation is realized only when both of these features are checked. They come up with the following generalization about the distribution of NC in *ne..ne* phrases (reworded for clarity):

(78) **Şener & İşsever's generalization:**

For sentences with subject and object *ne..ne* phrases:

- a. $[_F \text{ ne..ne }] \rightarrow \text{no NC}$ (or, equivalently, $\text{NC} \rightarrow \text{no } [_F \text{ ne..ne }]$)
- b. $\text{no NC} \rightarrow [_F \text{ ne..ne }]$ (or, equivalently, $\text{no } [_F \text{ ne..ne }] \rightarrow \text{NC}$)

The following sentences, taken from Şener and İşsever (2003), exemplify these conditions. In particular, the *ne..ne* sentences in (79) lack NC: these can only be grammatical when the focused constituent is the *ne..ne* phrase. This fact gives rise to

³¹ My attempts to elicit some included 'with no (high) certainty', 'at no high frequency', hoping that something could be constructed with *hiç*, but these could not be constructed in Turkish.

the generalization in (78b). The *ne..ne* sentences in (80) exhibit NC with sentential negation: they can only be grammatical when the focused constituent is different from the *ne..ne* phrase.³² This fact gives rise to the generalization in (78a).

- (79) a. [_F Ne anne-m ne baba-m] ev-e gel-di.
 ne mother-1sg ne father-1sg house-dat come-past.3sg
 Neither my mother nor my father came home.
 b. *Ne anne-m ne baba-m ev-e [_F gel-di].
 ne mother-1sg ne father-1sg house-dat come-past.3sg
 c. *Ne anne-m ne baba-m [_F ev-e] gel-di.
 ne mother-1sg ne father-1sg house-dat come-past.3sg
- (80) a. Ne anne-m ne baba-m ev-e [_F gel-me-di].
 ne mother-1sg ne father-1sg house-dat come-neg-past.3sg
 Neither my mother nor my father came home.
 b. Ne anne-m ne baba-m [_F ev-e] gel-me-di.
 ne mother-1sg ne father-1sg house-dat come-neg-past.3sg
 c. * [_F Ne anne-m ne baba-m] ev-e gel-me-di.
 ne mother-1sg ne father-1sg house-dat come-neg-past.3sg

Put against a background of optional NC, this generalization deserves some attention, for the following reasons. First, many authors claim a tight relationship between negation and focus (e.g. Kural, 1992; Laka, 1990; Pinón, 1993). Moreover, as noticed by St-Amour (2009); Zeijlstra (2004) among others, prosodic emphasis can disambiguate cases of optional NC, as in the following French example.

- (81) *Personne aime personne.*
 nobody loves nobody
 Neutral prosody: NC or double negation readings available.
 Stress on the first “nobody”: double negation only.

Despite these cross-linguistic observations that prosodic stress and semantic negation come hand in hand, I will show that Şener & İşsever’s focus-dependency analysis is inadequate to account for the optionality of NC with Turkish *ne..ne* phrases. In particular, I argue that the generalization in (78) is incorrect, at least for my native-speaker consultants. First, I give a number of arguments against (78a), i.e. that focus on the *ne..ne* phrase entails the lack of NC (section 5.1.1). Second, I show that (78b), i.e. that lack of focus on the *ne..ne* phrase entails NC, is true in the cases presented by Şener & İşsever, but not others, and that Şener & İşsever’s cases are explained by this paper’s account, i.e. the presence of non-clausal coordination (section 5.1.2). While I do maintain the possibility that Şener & İşsever and their consultants have a different Turkish grammar from my consultants for the cases that I challenge, I argue in section 5.1.3 that the evidence that they provide to diagnose focus, i.e. prosodic

³² Note that as these examples suggest, Şener & İşsever take the ‘no [_F *ne..ne*]’ condition, i.e. absence of focus on the *ne..ne* phrase, only as cases in which something else than the *ne..ne* phrase is focused, and never when nothing is focus, or when there is broad focus. This gap will be addressed later in this section.

prominence and subtle intuitions about givenness, is insufficient and potentially misinterpreted. Finally, in 5.1.4, I claim that despite the independence between NC with *ne..ne* phrases and information structure, there is a non-trivial interaction that often results in effects resembling Şener & İşsever's generalization, and discuss how these may arise.

5.1.1 Against (78a): Focus on the *ne..ne* phrase independent of NC

In the following, I argue against (78a), i.e. I show that information-structural focus on *ne..ne* phrases is not a condition for the absence of NC. I list different tests for information-structural focus in Turkish, and show that all of them allow both focused and non-focused *ne..ne* phrases to occur with or without sentential negation. I note whenever preferences were observed for one form or the other: however, no systemic correlation between focus and absence of NC was observed across the tests. In all the following examples, the double negation reading is available (with the appropriate context); I ignore it, however, as it is irrelevant to the argument.

1. *Question-answer focus.* In the following example, the *ne..ne* sentence is an answer to a wh-question, and is therefore focused. Both forms of the predicate, with and without negation, are possible. In order to control for polarity, the questions were asked both with and without sentential negation.

(82) *Ali and/or Beste were expected at the party. I didn't go and want to know who was there.*

a. Possible questions:

- i. – Kim gel-(me)-di?
who come-(neg)-past
Who came? / Who didn't come?
- ii. – Ali mi Beste mi gel-(me)-di?
Ali Q Beste Q come-(neg)-past
Did Ali or Beste (not) come? (alternative question)
- iii. – Ali ve/veya Beste gel-(me)-di mi?
Ali and/or Beste come-(neg)-past Q
Did Ali and/or Beste (not) come? (polar question)

b. – Ne Ali ne Beste gel-(me)-di, maalesef.
NE Ali NE Beste come-(neg)-past unfortunately
Neither Ali nor Beste came, unfortunately.

A note on the judgments: among the seven people asked, most accept all possibilities, but there is some variation, albeit non-systematic, e.g. one person rated the non-negated response for the (i) questions low. This goes in the opposite direction of what Şener & İşsever expect, i.e. these examples are set up so that the *ne..ne* phrase is focused. Note that these answers differ from the ones provided by Şener & İşsever for (ii) and (iii).

2. *Contrastive/new information focus*. Below is a sentence in which the *ne..ne* phrase is in a contrastive focus position, and also conveys new information, doubly predicting it to be focused. However, both forms of the verb, negated and non-negated, are possible in the *ne..ne* sentence, with a preference from some speakers for the non-negated version.

- (83) Önceden, herşeyi ye-r-di. Ama şimdi, ne et ne balık yer/yemez.
 before everything ear-aor-past but now ne meat ne fish eat.(neg).aor
 Before, she ate everything. But now, she eats neither meat nor fish.

3. *Corrective focus*. Corrective focus is a test that can be used to closely control for the rest of the sentence to stay identical. In the following, what is being corrected is the coordination operator. Again, both forms of the verb are possible.

- (84) a. – Ya Ayşe ya Can gel-me-di.
 or Ayşe or Can come-neg-past
 Either Ayşe or Can didn't come.
 b. – Aslında, ne Ayşe ne Can gel-(me)-di.
 actually ne Ayşe ne Can come-(neg)-past
 Actually, neither Ayşe nor Can came.

4. *Pseudo-clefts*. In pseudo-clefts, the complement of the copula in the main clause is always focused. Here, it is a *ne..ne* phrase, and it is compatible with both the positive and negative version of the copula.

- (85) Can-ı davet ed-en ne Ali ne Beste-y-di / değil-di.
 Can-acc invite do-rel ne Ali ne Beste-cop-past / neg.cop-past
 The person who invited Can was neither Ali nor Beste.

5. *Focus-sensitive operators*. As mentioned in section 3.1.3, some speakers allow *ne..ne* phrases to be targeted by focus-sensitive operators. By definition, this means that the *ne..ne* phrase is focused. However, in these cases, only the negated form of the verb is possible.

For all five tests, a focused *ne..ne* phrase is compatible with NC with sentential negation (and for Test 5, has obligatory NC). No native speaker who was asked responded in line with what Şener & İşsever were expecting, i.e. no NC when the *ne..ne* phrase is focused. This strongly suggests that information structure does not directly affect the presence or absence of NC with *ne..ne* phrases, contrary to Şener & İşsever's claim.

5.1.2 Against (78b): Lack of focus on the *ne..ne* phrase independent of NC

In this section, I show that the evidence that Şener & İşsever provide for (78b) is correct, but explainable under this paper's current proposal. In addition, I present additional cases not considered by Şener & İşsever that falsify (78b).

Şener & İşsever defend their generalization in (78b), i.e. that the absence of focus on the *ne..ne* phrase entails NC, by presenting examples with focus on constituents

clausemate to *ne..ne* phrases, that are not the *ne..ne* phrases themselves. Such examples can be found below, in (86) (equivalently, in (79b-c), that contrasts with grammatical NC examples in (80b-c)).

- (86) a. *Beste ne yeni ne eski bir gemi [aldı]_F.
 Beste ne new ne old one ship bought
 b. *Beste ne yeni ne eski bir [gemi]_F aldı.
 Beste ne new ne old one ship bought

I argue that this fact is in fact a correlate of the absence of clausal coordination. In particular, I show that non-contrastive constituents in the scope of a coordination cannot be focused. Thus, in cases of clausal coordination, only contrastive constituents may be focused. These differ from sentences with non-clausal coordination, in which elements outside of it may be focused.

I first give evidence from a sentence with *ya..ya* ('either..or') coordination of a subject-object string, which must be analyzed as clausal coordination with gapping. Below is a grammatical example, where contrastive elements are focused.

- (87) Ya Beste [yeni]_F ya Can [eski]_F bir gemi aldı.
 or Beste new or Can old one ship buy
 Either Beste bought a new ship, or Can bought an old one.

Using the same string, that again must underly clausal coordination, focus on non-contrastive constituents is ungrammatical, as shown in the following examples.

- (88) a. *Ya Beste yeni ya Can eski bir gemi [aldı]_F.
 or Beste new or Can old one ship bought
 b. *Ya Beste yeni ya Can eski bir [gemi]_F aldı.
 or Beste new or Can old one ship bought

On the other hand, if we consider a string that doesn't require gapping and is thus compatible with a non-clausal analysis, it is grammatical to focus a constituent outside the coordination. Below is an example with a coordination of adjectives alone.

- (89) a. Beste ya yeni ya eski bir gemi [aldı]_F.
 Beste or new or old one ship bought
 b. Beste ya yeni ya eski bir [gemi]_F aldı.
 Beste or new or old one ship bought
 Beste bought either a new or an old ship.

The grammaticality contrast between (89) and (88) appears to be due to whether the (non-contrastive) focused element can lie outside the scope of the coordination. When the structure must be clausal as in (88), a non-contrastive element is forced to be inside the coordination, and focusing it renders the sentence ungrammatical.

Turning back to the *ne..ne* sentences in (86), their ungrammaticality follows from analyzing them as cases as clausal coordination with focus on non-contrastive constituent. Therefore, the examples that Şener & İşsever present to back their focus-dependent generalization in (78b) can be explained away under the proposal given in this paper, making a focus-based analysis redundant.

I now present cases in which (78b) is incorrect. More specifically, I show cases of non-contrastive constituents that can be focused, yet are compatible with both NC and lack of NC. These are sentences in which a focused constituent appears before the *ne..ne* phrase. Below are examples of questions with constituent focus, i.e. *wh*-questions or narrow focus polar questions in (90a), and a prosodically focused constituent in a declarative (90b).

- (90) a. {Kim, Ali mi} ne et ne balık ye-(me)-di?
 who Ali MI NE meat NE fish eat-(NEG)-PAST
 {Who, Is it Ali who} ate neither meat nor fish?
- b. [Ali]_F ne et ne balık ye-(me)-di.
 Ali NE meat NE fish eat-(NEG)-PAST
 It is Ali who ate neither meat nor fish.

These examples can be naturally expressed with or without a sentential negation marker. This means that the absence of focus on the *ne..ne* phrase does not correlate with the presence of the sentential negation marker.

How is (90) different from the ungrammatical examples above? In (90), the constituent is in a position that can be the result of ATB extraction, and as most movements in Turkish, we assume ATB movement is overt, and therefore cannot target the focused constituents in examples like (86) and (88), that stay within the scope of the coordination. When moved, the constituent is out of the coordination structure and can be focused.

5.1.3 Şener & İşsever's evidence for focus

In this section, I argue that the evidence Şener & İşsever (2003) provide for focus, i.e. facts reported about judgments about givenness, and prosodic prominence, is insufficient, while discussing alternative sources of prosodic prominence that Şener & İşsever could have mistakenly identified as focus.

Three native speakers were informally asked about the intuitions described by Şener & İşsever (2003) (p.1098, example (20)), i.e. that a *ne..ne* sentence without sentential negation generates the intuition that the predicate of the sentence (i.e. the part outside the *ne..ne* phrase) is given. They all disagree with this intuition. This result could of course underly different grammars, but might also be a misinterpretation of subtle judgments, uncorroborated by other evidence. Prosodic prominence is indeed not sufficient to determine focus, since it is also correlated with linguistic properties other than information structure.

In particular, I argued in section 3.1.5 that clausal vs. non-clausal coordination structures could be distinguished prosodically. Thus, Şener & İşsever could have picked up on this data, i.e. they might have mistaken the prosodic reflex for clausal vs. non-clausal constituency as information-structural focus. Another likely possibility is mentioned by Şener & İşsever (2003) themselves in their footnote 14, leaving the issue for future research: the Turkish negation morpheme has been described as a pre-stressing suffix (Kahnemuyipour & Kornfilt, 2007, 2011; Kamali & Samuels,

2008), i.e. it attracts stress to the preceding syllable (generally on the verb root morpheme). This means that whether there is a *ne..ne* phrase in the sentence or not, the negation morpheme will generate a pitch accent on the verbal complex, as shown in the following examples (from Kamali and Samuels (2008)); the pitch accent is indicated by underlining.

- (91) a. Ali iskambıl oyna-dı. (stress on object)
 Ali cards play-past
- b. Ali iskambil oyna-ma-dı. (stress on pre-neg syllable)
 Ali cards play-neg-past

Thus, what Şener & İşsever identified as focus on the predicate in *ne..ne* phrases could have instead been a non-information structural pitch accent caused by the presence of the negation morpheme.

5.1.4 The role of information structure in the interpretation of *ne..ne* phrases

In sections 5.1.1 and 5.1.2, I provided a number of arguments that information structure does not determine the presence of NC. In the previous section 5.1.3, I showed that there were many sources of potential misinterpretation of elements of *ne..ne* sentences as focus. In this section, I argue that despite my claim that information structure does not determine NC with *ne..ne* phrases, Şener & İşsever's intuition should not be fully dismissed. Indeed, information structural effects do often seem to arise from the choice of the negated vs. non-negated version of the verb, for an otherwise equivalent truth-conditional contribution. This in itself is not surprising: the choice between two logically equivalent but structurally different possibility may be subject to more subtle pressures, e.g. processing and the structuring of information. I discuss below how this may come about.

First, I noted in section 3.1.6 that the non-negated version of the verb appears to be the default, and speculated that this might be due to the preference of clausal coordination, due to its simpler semantic composition. If we go along with this reasoning, we might wonder when to use the negated verb and why use it at all. First, as argued in section 5.1.2, in many cases, focusing the verb in fact forces the coordination to be non-clausal, and thus the verb to be negated. For those cases, there is no choice but to use the non-default NC construction. In cases where the negated version of the verb is optional, we might still want to use it if we want to bring attention to it, since negation adds overt material, and attracts stress, as mentioned in 5.1.3. Because there is no other reason to use this non-default negated form of the verb other than to focus it, non-focused verbs in *ne..ne* sentences will generally be non-negated.

Second, there are reasons for the *ne..ne* phrase to be focused by default. Focus may come in particular from the pragmatic contribution of negation, as well as the focus-sensitivity of reiterated particles. Negation is generally pragmatically non-neutral, as it introduces an inference that its prejacent was expected. As for reiterated particles, they have been analyzed as being focus-sensitive: Hendriks (2003) analyzes *either* in English and Dutch as a focus particle; Gajić (2018) analyzes BCS *ni* ('nor') similarly. If these analyses are extendable to Turkish *ne..ne*, then any *ne..ne*

sentence requires that the contrastive constituents be focused. As shown above, this focus structure does not preclude additional focused constituents, that add themselves to the information present in the sentence. However, it is reasonable to assume that by default the *ne..ne* phrase is in prominence.

To conclude, while optional NC with *ne..ne* phrases is not a direct result of information structure, the choice of using a sentential negation marker in a *ne..ne* sentence is likely to interact with it, much along the lines proposed by Şener & İşsever (2003).

5.2 Turkish *ne..ne* in the typology of reiterable particles: Szabolcsi (2018)

In this section, I discuss Turkish NC system in light of the analysis provided by Szabolcsi (2018a, 2018b) for Hungarian hybrid NC and the typology she provides for reiterable particles. I will show that despite apparent likeness, the source of hybridity in the two languages is ultimately different.

Hungarian is the sole hybrid NC system that has been described as such (and given an analysis for) in the literature, by Surányi (2006) and Szabolcsi (2018a, 2018b). Its similarities with the Turkish NC system call for our attention. Surányi (2006) posits ambiguity between negative vs. non-negative, and existential vs. universal NCIs. Extending this analysis to Turkish would be non-trivial and add extra complexity, as such it does not explain the empirical picture and the difference in distribution between negative and non-negative *ne..ne* phrases. I therefore focus my discussion on Szabolcsi (2018a, 2018b).

The hybridity in Hungarian is observed in the existence of two versions of each NCI (both for existential and disjunctive types), creating two classes, the “*sem X*” type behaving strictly, as shown in (92a) and (93a), the “*X sem*” type non-strictly, as shown in (92b) and (93b).

- (92) Neither Kati nor Mari slept:
- a. **Sem** Kati, **sem** Mari ***(nem)** aludt.
nor Kati nor Mari ***(not)** slept
 - b. Kati **sem**, Mari **sem** ***(nem)** aludt.
Kati nor Mari nor ***(not)** slept
- (93) No-one slept:
- a. **Senki** ***(nem)** aludt.
no-one ***(not)** slept
 - b. **Senki sem** ***(nem)** aludt.
no-one nor ***(not)** slept

The examples above are preverbal. Post-verbal counterparts of these NCIs all require the negation *nem*: this makes the *sem X* type have a strict NC behavior, and *X sem* type have a non-strict behavior.

How does this distribution compare to the Turkish one? While there is no counterpart in Turkish to the alternation in NC behavior observed with Hungarian quantifier

NCIs as seen in (93), the NC behavior with *sem..sem* phrases in (92) is very reminiscent of the optional NC with Turkish *ne..ne* phrases. Indeed, we could imagine that the morphological difference observed in Hungarian between the strict and non-strict *sem..sem* NCIs is syncretic in Turkish *ne..ne* phrases, but that the analysis is the same underlyingly. Hungarian *sem..sem* phrases vary between “strict NC” and “non-strict NC”, while Turkish *ne..ne* phrases vary between “strict NC” and “no NC”. However, Hungarian “non-strict NC” and Turkish “no NC” may not necessarily be different phenomena, given that Turkish has SOV word order, and therefore NCIs are almost always pre-verbal, which in a non-strict NC system corresponds to “no NC.” Furthermore, as seen in section 3.1.3, moving a *ne..ne* phrase to a post-verbal position (by backgrounding) does require negation on the verb, which could bring one to qualify the *ne..ne* behavior as non-strict NC. The distribution of NC with *neither..nor* phrases between Hungarian and Turkish is thus similar enough to consider a similar analysis.

Szabolcsi accounts for the difference of NC behavior between the “*sem X*” and the “*X sem*”-type NCIs by motivating two different syntactic statuses: quantifier-phrase internal particles and heads on the clausal spine. The NC behavior follows from this difference, and I will not detail the analysis here. Szabolcsi (2018b) argues for a typology of reiterable particles, in Hungarian and beyond, where they fall in one of the two categories she describes, i.e. quantifier-phrase internal particles and heads on the clausal spine, correlating with a number of characteristics. The following table summarizes the typology of these particles in Hungarian, along with their descriptive properties.

	head on the clausal spine	quantifier-internal
particles	<i>X sem</i> (‘nor’), <i>is</i> (‘and’)	<i>sem X</i> (‘nor’), <i>mind</i> (‘all’), <i>vagy</i> (‘or’), <i>akár</i> (‘whether’)
position	follows host	precedes host
part of a tuple?	need not be	must be
tuple-internal connective	<i>és</i>	<i>pedig</i>
builds quantifier words?	no	yes
NCI behavior	non-strict	strict

Assuming this picture and its extendability to other languages (as Szabolcsi herself proposes), I argue that *ne..ne* phrases, whether NC-inducing or not, always pattern with Szabolcsi’s “quantifier-internal” particles. Note the analysis from this paper analyzes the NE operator as being on the clausal spine, in the case of clausal *ne..ne* phrases, which at first glance suggests a similarity between the analyses for Turkish and Hungarian. However, the presence of NE on the clausal spine is simply a side effect of coordinating clauses, and does not generalize to smaller coordinations, as it does in Hungarian (moreover, the *ne* particles themselves are not necessarily on the clausal spine in these examples).

I will show that the quantifier-internal behavior of *ne..ne* is similar to that of other Turkish particles like *hem* (for “both..and”) and *ya* (for “either..or”), but differs from that of particles *da* (“as well as”) and *mi* (the question particle, used for polar and alternative questions), which instead pattern with Szabolcsi’s “heads on the clausal

spine”. Some of the following observations are repeated from that Szabolcsi (2018b) (who includes Turkish in the cross-linguistic discussion), others are additions.

For the sake of this discussion, I distinguish between “NC-*ne*” and “noNC-*ne*” particles. First we check the position of these particles relative to their host. For both NC-*ne* and noNC-*ne*, the particle *ne* always precedes its host, just like *hem* and *ya*, which is a property of quantifier-internal particles. In contrast, reiterable particles *dA* and *mI* follow their host (projections on the clausal spine in Turkish are head-final: we thus indeed expect particles on the clausal spine to follow the host, like in Hungarian).

Next, we check whether the particles must be part of a tuple (i.e. apply to more than one member of a coordination). Particles NC-*ne*, noNC-*ne*, *hem* and *ya* must be part of a tuple, as is the case for quantifier-internal particles. In contrast, *dA* and *mI* can stand alone, as is the case for heads on the clausal spine.

We now look at tuple-internal connectives. For the set of particles that is delimiting itself as quantifier-internal, i.e. NC-*ne*, noNC-*ne*, *hem*, *ya*, the tuple-internal connective is always the same, *dA*.³³ There is no tuple-internal connective for reiterable *dA*; for reiterable *mI*, there is *yoksa* (“otherwise”).³⁴

The question as to whether these particles build quantifier words is not revealing for comparing NC-*ne* and noNC-*ne*, but it is in showing further evidence distinguishing the two classes of Turkish particles. *Hem* is related to the quantifier word *herkes* (“everyone”). *Ya* and *ne* are not obviously related to quantifier words, but they are to words that could be unified with a class of quantificational elements, that includes simple connectives and *wh*-words. *Ya* builds the connective *veya* (“or”) when combined with *ve* (“and”). *Ne* is homophonous with the word for “what” – if *ne..ne* phrases are treated as disjunctions, which they are in this paper, this homophony is not that surprising (see Szabolcsi (2015)). On the other hand, *dA* and *mI* don’t seem to be related to any of these quantificational elements.

Given how closely the behaviors of the two classes of particles predicted by Szabolcsi (2018b) aligns with Turkish particles, and that NC-*ne* and noNC-*ne* both pattern similarly to quantifier-internal particles for all the properties distinguishing them from heads on the clausal spine, it is very compelling to say that *ne*, in all its uses, is a quantifier-internal particle. Since the hybridity in Hungarian NC stems directly from the distinction between these two classes of particles, it can’t be the source of hybridity in Turkish, if both NC-*ne* and noNC-*ne* are quantifier-internal particles.

Finally, this paper shows that a unification of NC-*ne* and noNC-*ne* is possible and natural along the lines of non-clausal vs. clausal coordination. In contrast, Szabolcsi shows that both classes of NCI particles – quantifier-internal and heads on the clausal spine – are compatible with clausal coordination, as shown in the examples below.

- (94) a. Sem Kati nem evett, sem Mari nem ivott.
nor Kati neg ate nor Mari neg drank

³³ Note that this tuple-internal connective is identical to the reiterable head “as well as”, a detail that would be interesting to include in the typological discussion started by Szabolcsi. See Kamali and Karvovskaya (2013) for discussion on the syntax/semantics of *dA*, and Karvovskaya (2013) for a unifying analysis of the additive and connective uses of a similar particle in Ishkashimi.

³⁴ See Jeretič (2019) for an analysis of special uses of this particle.

- b. Kati sem evett, Mari sem ivott.
 Kati nor ate Mari nor ate
 Neither Kati ate, nor Mari drank.

Therefore, the clausality of the coordination is not a property that distinguishes the two classes of NCIs in Hungarian, unlike in Turkish. This is additional evidence that shows that Turkish optional NC with *ne..ne* phrases is not to be likened to the variable NC behavior observed with Hungarian *sem..sem* coordinations.³⁵

In summary, I have argued that the apparent similarities between the hybrid NC in Turkish and Hungarian come from different sources: the hybridity of Hungarian NC stems from the availability of two types of NCIs – built from quantifier-internal particles or heads on the clausal spine; in contrast, Turkish *ne..ne* phrases are unambiguous in their syntactic status, all built from quantifier-internal particles, while the optionality in NC behavior stems from their type-flexibility, as argued in this paper.

6 Hybrid and optional NC in other languages

In this section, I discuss the implications of the proposed analysis on the typology and analyses of other languages that exhibit hybridity and optionality and their NC systems.

6.1 Other hybrid systems

To my knowledge, the literature does not discuss any other hybrid systems. However, there seem to be a number that display it.³⁶ Farsi and Kurmanji Kurdish³⁷ seem to function in the same way as Turkish, in which quantifier NCIs behave strictly, and *neither..nor* phrases have optional NC. Another class of hybrids includes Greek, Cairene Arabic, and Hebrew,³⁸ that have NC systems that separate quantifier NCIs and *neither..nor* phrases, where the latter behave strictly, and the former non-strictly. Here are sentences from Greek that exemplify this paradigm:

- (95) a. Post-verbal quantifier NCI
 I Maria ***(den)** ide **kanenan**.
 the Maria ***(neg)** saw **no-one**
 Maria saw no-one.

³⁵ These examples raise the question why NC with Turkish *ne..ne* phrases is not compatible with clausal coordination, while the corresponding Hungarian construction (94a) is. A comparison of Szabolcsi's (2018a) and this paper's analyses reveals that this difference can be traced to different positions for the negation markers between the two languages. Szabolcsi (2018a) analyzes Hungarian negation *nem* as the head of a high NegP that c-commands the TP, and can thus license a TP-sized NCI – this accounts for NC with *nem* in TP coordinations. In contrast, the Turkish negation markers are found below the TP and cannot license TP-sized NCIs, forcing the use of a high null negation.

³⁶ The data I summarize here comes from my own searches; note, however, that this work is only preliminary, and that it was biased towards comparing typical NCIs and *neither..nor* phrases, and that an exhaustive study of the behavior of *ne..ne* phrases has not been done. This is left for further research.

³⁷ Thanks to Heval Batu for Kurdish, and Zahra Mirazi and Amir Anvari for Farsi.

³⁸ Thanks to Maria Kouneli for Greek and Suhail Matar for Cairene Arabic and Hebrew.

- b. Pre-verbal quantifier NCI
Kanenas ***(den)** ide ti Maria.
No-one ***(neg)** saw the Maria
 No-one saw Maria.
- (96) a. Post-verbal *ute..ute* (*neither..nor*)
 O Pavlos ***(den)** ide **ute** ti Maria **ute** to Jani.
 the Pavlos ***(neg)** saw **ne** the Maria **ne** the Jani
 Pavlos saw neither Maria nor Jani.
- b. Pre-verbal *ute..ute* (*neither..nor*)
Ute i Maria **ute** o Janis ***(den)** idan ton Pavlo.
ne the Maria **ne** the Janis ***(neg)** saw the Pavlos
 Neither Maria nor Janis saw Pavlos.

Importantly, in all of these languages, the split in NCIs happens along the existential/*neither..nor* line. It never happens between different types of quantifier NCIs (e.g. presenting different morphological structures, or different syntactic categories, like nominal vs. adverbial). The analysis presented in this paper provides an explanation for this tendency.

6.2 Optional NC beyond *neither..nor*

In contrast with Turkish and the languages mentioned above, there are languages such as Bavarian (Bayer, 1990; Steixner, 2012), Catalan (Espinal et al., 2016; Quer, 1993), Old Italian (Garzonio & Poletto, 2012) and West Flemish (Breitbarth & Haegeman, 2014; Haegeman, 1995), in which *all* NCIs exhibit optional NC with sentential negation. Espinal et al. (2016) propose that Catalan optional NC is due to a semantic ambiguity between negative and non-negative NCIs. However, we could avoid such ambiguity and instead extend the analysis proposed in this paper to all types of optional NC. This would involve considering the counterpart of a type-flexible disjunction for existential quantifiers making up generalized quantifier NCIs, where they would be able to quantify not only over individuals, but over propositions. Such an analysis could essentially follow the lines of Kratzer and Shimoyama (2002), who propose propositional quantification over Hamblin alternatives generated by Japanese indeterminate pronouns. A notable application of this analysis is in Szabolcsi (2018b) (discussed in 5.2), who proposes propositional quantifiers invoked by the features of quantifier particles appearing in coordinations and quantifier words, including NCIs, a potentially comparable domain to the one discussed here.

I sketch the analysis for optional NC (using Catalan as a working example), that arises from the type-flexibility of an existential quantifier. For example, take the following Catalan sentence, that displays optional NC between the NCI ‘ningú’ and the sentential negation marker ‘no’.³⁹

³⁹ I thank Bernat Bardagil Mas for confirmation of this optional NC.

- (97) Ningú (no) dormia.
no-one (neg) slept
No-one slept.

We can treat the NCI *ningú* as a non-negative indefinite expression (just like Zeijlstra (2004) treats NCIs), which, following Kratzer and Shimoyama (2002), would be a set of individuals, here the set of all humans (in a given domain), given in (98). It would carry some uninterpretable features [uNE_x], and have to agree with an existential quantifier EX carrying [iNE_x] and [uNeg]; EX would be type-flexible, and thus be able to apply to individuals or propositions – as defined in (99).

$$(98) \llbracket \text{ningú} \rrbracket^{w,g} = \{x : \text{human}(x)(w)\}$$

$$(99) \llbracket \text{EX} \rrbracket^{w,g} = \lambda \alpha_{\tau} \cdot \begin{cases} \{\lambda w'. \exists p [p \in \llbracket \alpha \rrbracket^{w,g} \wedge p(w') = 1]\} & \tau = \langle st, t \rangle \\ \{\lambda P \lambda w'. \exists x [x \in \llbracket \alpha \rrbracket^{w,g} \wedge P(x)(w') = 1]\} & \tau = \langle e, t \rangle \end{cases}$$

Finally, I assume standard alternative semantics, and take predicates to be singleton sets containing a property, as in (100), and composition to follow pointwise function application (PFA), defined in (101).

$$(100) \llbracket \text{dormia} \rrbracket^{w,g} = \{\lambda x \lambda w'. \text{slept}(x)(w')\}$$

$$(101) \text{PFA: For } \alpha : \langle \sigma, \tau \rangle \text{ and } \beta : \sigma, \llbracket \alpha(\beta) \rrbracket^{w,g} = \{f(d) | f \in \llbracket \alpha \rrbracket^{w,g} \text{ and } d \in \llbracket \beta \rrbracket^{w,g}\}$$

Given these ingredients, there are two ways to derive the meaning that ‘no-one slept’ in Catalan, because of the type-flexibility of EX. Either the existential operator applies directly to *ningú*, as in (102), or to the final proposition, as in (103):

- (102) a. $\llbracket \text{EX ningú} \rrbracket^{w,g} = \{\lambda P \lambda w'. \exists x [\text{human}(x)(w) \wedge P(x)(w') = 1]\}$
b. $\llbracket [\text{EX ningú} \text{ dormia}] \rrbracket^{w,g} = \{\lambda w'. \exists x [\text{human}(x)(w) \wedge \text{slept}(x)(w') = 1]\}$
- (103) a. $\llbracket \text{ningú dormia} \rrbracket^{w,g} = \{p : \exists x [\text{human}(x)(w) \wedge p = \lambda w'. \text{slept}(x)(w')]\}$
b. $\llbracket \text{EX} [\text{ningú dormia}] \rrbracket^{w,g} = \{\lambda w''. \exists p. \exists x [\text{human}(x)(w) \wedge p = \lambda w'. \text{slept}(x)(w') \wedge p(w'') = 1]\}$

The LFs in (102b) and (103b) are equivalent. What differs is the syntactic position of EX, that is assumed to carry [uNeg] and thus has to agree with a negation operator. In (102), the EX originates in the vP, thus c-commanded by NegP, whose head we assume can check off its [uNeg], following the analysis in this paper. In (103), the EX originates above the TP, and therefore cannot have agreed with the Neg head’s features, and requires a higher covert operator to license it.

The optional NC is thus derived. This analysis is to be taken as a suggestion, calling for further work to check its viability for different optional NC languages.

Note that to account for the tendency to have optional NC more often with *neither...nor* phrases only, as described in the previous paragraph, type-flexible quantifiers would be less widespread than type-flexible coordinations.

7 Conclusion

In this paper, I have given a reductionist analysis of the Turkish NC system, in which *ne..ne* phrases have optional NC behavior, that contrasts with the strict behavior of quantifier NCIs. I have argued that the observed behavior is dependent on the semantic types of the operators underlying each class of NCIs: optionality is caused by the type-flexibility of disjunction, while hybridity is caused by the difference of the flexible type of disjunction and the rigid type of the existential quantifier. These semantic types in turn determine the position of the NCI operator relative to the syntactic positions of interpretable negation; in particular, clausal *ne..ne* phrases utilize the phonologically null CP-level NegOp head, while non-clausal *ne..ne* phrases and quantifier NCIs utilize the phonologically overt low Neg head. The actual mechanics specific to the NC system can be kept unchanged from a traditional analysis of NC, making the present analysis of optionality and hybridity more desirable than alternatives, proposed for Turkish and other languages (Şener and İşsever (2003), Szabolcsi (2018b) for Hungarian, Espinal et al. (2016) for Catalan).

This work contributes to the understanding of the variability in the typology of NC systems. It suggests that variation in NC systems may not be due so much to variation in the mechanics of the NC system, but to factors external to it. In addition, it provides an argument against obligatory conjunction reduction analyses of coordination.

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References

- Abels, K., & Martí, L. (2010). A unified approach to split scope. *Natural language semantics*, 18(4), 435–470.
- Acquaviva, P. (1996). The logical form of negative concord. *Working Papers in Linguistics*, 6.2, 1996, pp. 1-27.
- Aygen, G. (2002). Extractability and the nominative case feature on tense. In *Proceedings of the ICTL 2000 International Conference in Turkish Linguistics*. Istanbul: Boğaziçi University.

- Bayer, J. (1990). What Bavarian negative concord reveals about the syntactic structure of German. *Grammar in Progress. Glow Essays for Henk van Riemsdijk*(36), 11–23.
- Bayırlı, I. K. (2017). *The universality of concord* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.
- Borsley, R. D., & Kornfilt, J. (2000). Mixed extended projections. In *The nature and function of syntactic categories* (pp. 101–131). Brill.
- Breitbarth, A., & Haegeman, L. (2014). The distribution of preverbal *en* in (West) Flemish: syntactic and interpretive properties. *Lingua*, 147, 69–86.
- Chomsky, N. (1995). Categories and transformations. *The minimalist program*, 219, 394.
- Chomsky, N. (2001). *Derivation by phase. Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, N. (2008). On phases. *Current Studies in Linguistics Series*, 45, 133.
- Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press on Demand.
- Collins, C., & Postal, P. M. (2014). *Classical neg raising: An essay on the syntax of negation* (Vol. 67). MIT press.
- Collins, C., Postal, P. M., & Yevudey, E. (2017). Negative polarity items in ewe. *Ms. New York University and Aston University*.
- Deal, A. R. (2021). Negative concord as downward agree. *Unpublished manuscript*.
- Den Dikken, M. (2006). Either-float and the syntax of co-ordination. *Natural Language & Linguistic Theory*, 24(3), 689.
- De Swart, H. (2000). Scope ambiguities with negative quantifiers. In *Reference and anaphoric relations* (pp. 109–132). Springer.
- De Swart, H., & Sag, I. A. (2002). Negation and negative concord in Romance. *Linguistics and Philosophy*, 25(4), 373–417.
- Espinal, M. T., Tubau, S., Borràs-Comes, J., & Prieto, P. (2016). Double negation in Catalan and Spanish. Interaction between syntax and prosody. In *Negation and polarity: Experimental perspectives* (pp. 145–176). Springer.
- Gajić, J. (2016). *Ni*-disjunction as a coordination marker and focus particle. *Proceedings of the 28th Student Session, European Summer School in Logic, Language and Information*.
- Gajić, J. (2018). Coordination and focus particles (re?)united. In *Proceedings of Sinn und Bedeutung* (Vol. 21, pp. 427–444).
- Garzonio, J., & Poletto, C. (2012). On *niente*: optional negative concord in Old Italian. *Linguistische Berichte*, 2012(230), 131–153.
- Gencan, T. N. (1979). *Dilbilgisi, Türk Dil Kurumu Yayınları* (Turkish grammar). *Ankara Üniversitesi Basımevi, Ankara, Türkiye*.
- Geurts, B. (1996). On “No”. *Journal of Semantics*, 13(1), 67–86. Retrieved from <https://doi.org/10.1093/jos/13.1.67> doi: 10.1093/jos/13.1.67
- Giannakidou, A. (1997). *The landscape of polarity items*. Rijksuniversiteit.
- Giannakidou, A. (2000). Negative... concord? *Natural Language & Linguistic Theory*, 18(3), 457–523.
- Giannakidou, A. (2006). N-words and negative concord. *The Blackwell companion to syntax*, 3, 327–391.

- Giannakidou, A., & Zeijlstra, H. (2017). The landscape of negative dependencies: Negative concord and n-words. *The Wiley Blackwell Companion to Syntax, Second Edition*, 1–38.
- Göksel, A. (1987). Distance restrictions on syntactic processes. In *Studies on Modern Turkish, proceedings of the Third conference on Turkish Linguistics* (pp. 69–81). Tilburg University Press, Tilburg.
- Göksel, A., & Kerslake, C. (2005). Turkish, a comprehensive grammar.
- Gonzalez, A., & Demirdache, H. (2015). Negative coordination: single vs. recursive ‘ni’ in French. *Proceedings of 44th LSRL*.
- Haegeman, L. (1995). *The syntax of negation* (Vol. 75). Cambridge University Press.
- Haegeman, L., & Zanuttini, R. (1991). Negative heads and the Neg Criterion. *The linguistic review*, 8(2-4), 233–252.
- Haegeman, L., & Zanuttini, R. (1996). Negative concord in West Flemish. *Parameters and functional heads*, 117–179.
- Hankamer, J. (1971). *Constraints on deletion in syntax* (Unpublished doctoral dissertation). Ph.D. dissertation, Yale University.
- Hankamer, J. (1979). *Deletion in coordinate structures*. Garland.
- Hendriks, H. L. W. (1993). *Studied flexibility*. Institute for Logic, Language and Computation.
- Hendriks, P. (2003). *Either as a focus particle*. Unpublished manuscript, University of Groningen.
- Hiraiwa, K. (2001). Multiple agree and the defective intervention constraint in Japanese. *MIT working papers in linguistics*, 40, 67–80.
- Hirsch, A. (2017). *A case for conjunction reduction* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.
- Ipek, C. (2015). *The phonology and phonetics of Turkish intonation* (Unpublished doctoral dissertation). University of Southern California.
- Jacobs, J. (1980). Lexical decomposition in Montague grammar. *Theoretical Linguistics*, 7(1-3), 121–136.
- Jendraschek, G. (2011). A fresh look at the tense-aspect system of Turkish. *Second Language Research*, 47, 242–270.
- Jeretič, P. (2019). Structured questions. In *36th West Coast Conference on Formal Linguistics*.
- Kahnemuyipour, A., & Kornfilt, J. (2007). Declassifying Turkish “pre-stressing” suffixes. In *Proceedings of the 2006 Annual Conference of the Canadian Linguistic Association*.
- Kahnemuyipour, A., & Kornfilt, J. (2011). The syntax and prosody of turkish “pre-stressing” suffixes. *Interfaces in linguistics: New research perspectives*, 205–221.
- Kamali, B., & Karvovskaya, L. (2013). ‘Also’ in Turkish and Ishkashimi. *Proceedings of WAFL*, 8, 181–186.
- Kamali, B., & Samuels, B. (2008). The syntax of Turkish pre-stressing suffixes. In *3rd Conference on Tone & Intonation in Europe, Lisbon*.
- Karvovskaya, L. (2013). ‘Also’ in Ishkashimi: additive particle and sentence connector.
- Kayabaşı, D., & Özgen, M. (2018). A phase-based account of NPI-licensing in

- Turkish. *Poznan Studies in Contemporary Linguistics*, 54(1), 83–113.
- Kelepir, M. (1999). *Turkish NPIs and scope of negation*. MIT.
- Kornfilt, J. (1984). *Case marking, agreement, and empty categories in Turkish* (Unpublished doctoral dissertation). Harvard University.
- Kornfilt, J. (1996). On some copular clitics in Turkish. *ZAS papers in linguistics*, 6, 96–114.
- Kornfilt, J. (1997). Turkish. Descriptive Grammars. *London and New York*.
- Kornfilt, J. (2001). Functional projections and their subjects in Turkish clauses. *The verb in Turkish*, 44, 183–212.
- Kornfilt, J. (2005). Asymmetries between pre-verbal and post-verbal scrambling in Turkish. *The free word order phenomenon: Its syntactic sources and diversity*, 163–180.
- Kornfilt, J. (2012). Revisiting suspended affixation and other coordinate mysteries. *Functional Heads: The Cartography of Syntactic Structures, Volume 7*, 7.
- Kornfilt, J. (2019). How to derive the directionality of verb ellipsis in Turkish coordination from general word order. In *Word Order in Turkish* (pp. 41–65). Springer.
- Kornfilt, J., & Whitman, J. (2011). Afterword: Nominalizations in syntactic theory. *Lingua*, 121(7), 1297–1313.
- Kratzer, A., & Shimoyama, J. (2002). Indeterminate Pronouns: The View from Japanese. *The proceedings of third Tokyo conference in psycholinguistics*, 1–25.
- Kural, M. (1992). Properties of scrambling in Turkish. *Ms. UCLA*.
- Kural, M. (1993). V-to(-I-to)-C in Turkish. *UCLA occasional papers in linguistics*, 11, 17–54.
- Kural, M. (1997). Postverbal constituents in Turkish and the linear correspondence axiom. *Linguistic inquiry*, 498–519.
- Labov, W. (1972). Negative attraction and negative concord in English grammar. *Language*, 773–818.
- Ladusaw, W. A. (1992). Expressing negation. In C. Barker & D. Dowty (Eds.), *Proceedings of Semantics and Linguistic Theory II* (Vol. 2, pp. 237–260). Ohio State Working Papers in Linguistics.
- Laka, I. (1990). *Negation in syntax—on the nature of functional categories and projections* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.
- Lewis, G. (1975). *Turkish grammar*. New York Oxford University Press.
- Linebarger, M. C. (1987). Negative polarity and grammatical representation. *Linguistics and Philosophy*, 10(3), 325–387.
- Loewen, G. (2007). Negation in Korean: A syntactic analysis. In *Proceedings of the 2007 Annual Conference of the Canadian Linguistic Association* (p. 1-15).
- McCloskey, J. (1979). *Transformational syntax and model theoretic semantics*. Reidel Publishing Company, Dordrecht.
- Merchant, J. (2001). *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford University Press.
- Mitrović, M., & Sauerland, U. (2014). Decomposing coordination. In *Proceedings of NELS* (Vol. 44, pp. 39–52).

- Ott, D., & de Vries, M. (2014). A biclausal analysis of right-dislocation. In *Proceedings of NELS* (Vol. 43, pp. 41–54).
- Öztürk, B. (2002). Turkish as a non-pro-drop language. *The Verb in Turkish*, 239–259.
- Öztürk, B. (2005). *Case, referentiality, and phrase structure*. J. Benjamins Publishing Company.
- Özyıldız, D. (2017). Quantifiers in Turkish. In D. Paperno & E. Keenan (Eds.), *Handbook of Quantifiers in Natural Language: volume II* (pp. 857–937). Springer.
- Partee, B., & Rooth, M. (1983). Generalized conjunction and type ambiguity. *Formal semantics: the essential readings*, 334–356.
- Penka, D. (2011). *Negative indefinites* (No. 32). Oxford University Press Mexico SA De CV.
- Penka, D. (2012). Negative features on negative indefinites: Evidence from split scope. *Journal of semantics*, 29(3), 373–402.
- Penka, D., & Zeijlstra, H. (2005). Negative indefinites in Dutch and German. In *20th comparative Germanic syntax workshop, Tilburg*.
- Pinón, C. (1993). SigmaP and Hungarian. In *Proceedings of the 11th West Coast Conference on Formal Linguistics* (Vol. 11, p. 388).
- Potsdam, E. (1998). A syntax for adverbs. In *The proceedings of the twenty-seventh Western conference on linguistics* (pp. 397–411).
- Potts, C. (2000). When even no's neg is splitsville.
- Prince, A., & Smolensky, P. (1993). Optimality theory: Constraint interaction in generative grammar. *Optimality Theory in phonology: A reader*, 3–71.
- Quer, J. (1993). The syntactic licensing of negative items. *Unpublished MA thesis, Universitat Autònoma de Barcelona*.
- Repp, S. (2006). $\neg(a\&b)$. gapping, negation and speech act operators. *Research on Language and Computation*, 4(4), 397–423.
- Ross, J. (1970). Gapping and the order of constituents. *Progress of Linguistics*, 249–259.
- Ross, J. R. (1967). *Constraints on variables in syntax*. (Unpublished doctoral dissertation). Massachusetts Institute of Technology.
- Schein, B. (2017). *'And': Conjunction Reduction Redux*. MIT Press.
- Selkirk, E. (2011). The syntax-phonology interface. *The handbook of phonological theory*, 2, 435–483.
- Şener, S., & İşsever, S. (2003). The interaction of negation with focus: *ne... ne...* phrases in Turkish. *Lingua*, 113(11), 1089–1117.
- Shimoyama, J. (2011). Japanese indeterminate negative polarity items and their scope. *Journal of Semantics*, 28(4), 413–450.
- St-Amour, M. (2008). A typological approach to the split scope readings of negative indefinites. In *Annual meeting of the berkeley linguistics society* (Vol. 34, pp. 293–304).
- St-Amour, M. (2009). Focused n-words and double negation readings in negative concord languages. In *Annual Meeting of the Berkeley Linguistics Society* (Vol. 35, pp. 436–446).
- Steixner, J. M. (2012). *On intervention effects in bavarian negative concord* (Unpublished doctoral dissertation). UniWien.

- Surányi, B. (2006). Quantification and focus in negative concord. *Lingua*, 116(3), 272–313.
- Szabolcsi, A. (2015). What do quantifier particles do? *Linguistics and Philosophy*, 38(2), 159–204.
- Szabolcsi, A. (2018a). Strict and non-strict negative concord in Hungarian: A unified analysis. In *Boundaries Crossed, at the Interfaces of Morphosyntax, Phonology, Pragmatics and Semantics* (pp. 227–242). Springer.
- Szabolcsi, A. (2018b). Two types of quantifier particles: Quantifier-phrase internal vs. heads on the clausal spine. *Glossa: a journal of general linguistics*, 3(1).
- Van der Auwera, J., & Van Alsenoy, L. (2016). On the typology of negative concord. *Studies in Language. International Journal sponsored by the Foundation “Foundations of Language”*, 40(3), 473–512.
- Winter, Y. (1996). A unified semantic treatment of singular NP coordination. *Linguistics and Philosophy*, 19(4), 337–391.
- Wurmbrand, S. (2008). *Nor*: neither disjunction nor paradox. *Linguistic Inquiry*, 39(3), 511–522.
- Zeijlstra, H. (2004). *Sentential negation and negative concord* (Unpublished doctoral dissertation). Netherlands Graduate School of Linguistics.
- Zeijlstra, H. (2008). Negative concord is syntactic agreement. *Ms., University of Amsterdam*, 5, 113.