# A PHASE-BASED ACCOUNT OF NPI-LICENSING IN TURKISH

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#### ABSTRACT

There is a consensus in the literature that a negative polarity item is an expression that requires a licenser varying from overt negation to questions or conditionals (see Benmamoun 1997; Kelepir 2001; Kumar 2006; Kural 1997; Laka 2013; Mahajan 1990; Vasishth 1999). However, the licensing conditions of NPIs might have different accounts, which has not been fully discussed within the literature. This study aims to discuss whether phasemateness (in the sense of Chomsky 2001 and further) might have a direct influence on NPI-licensing. Based on preliminary observations, the fact that the derivation will crash if a domain containing negative polarity items is spelled out before being licensed by a negative verb suggests that licensing of negative polarity items may have to do with their positions in the derivation in coordination with the accessibility of the spell-out domains as well as with asymmetrical c-command relationships. The analysis has also an extension and an implication as to such theoretical problem as phasehood of DPs.

KEYWORDS: Negative polarity items; phasehood; Turkish; phase; multiple spell-out.

### 1. Introduction

A negative polarity item is an expression that appears within negative contexts and needs a licenser varying from overt negation to questions or conditionals (*see* Benmamoun 1997; Kelepir 2001; Kumar 2006; Kural 1997; Laka 2013; Mahajan 1990; Vasishth 1999). These restrictions on where NPIs can or cannot appear imply that they need to be in a licensing environment. There are two main approaches as to this licensing environments: semantic and syntactic. Semantic approaches seem to dominate the literature (Ladusaw 1979, 1980; Line-

barger 1980, 1987, 1991; Sailer 2007; Sells 2001, 2006; Zwarts 1998 among others), yet there are quite a few syntactic accounts as well (Hwang 2008; Kelepir 2001; Laka 1994, 2013; Wagner 2005; Watanabe 2004; Zeijlsta 2008). Some of these syntactic approaches are within the framework of locality (Yoshimoto 1998), Phase Impenetrability Condition (Yamashita 2003) and binding (Progovac 2005). However; former accounts listed above with a syntactic perspective tend to agree upon the necessity of a c-command relation between the NPI and its licenser (Benmamoun 1997; Kelepir 2001; Kumar 2006; Kural 1997; Laka 2013; Mahajan 1990; Vasishth 1999). In addition, studies on NPIs seem to provide a discussion ground for semantic-syntactic interface as both semantic and syntactic perspectives are taken into account when studying NPIs (Błaszczak 2001; Giannakiodu 1997; Lasnik 1975; Ladusaw 1992; Progovac 1992, 2005). The purpose of our study is to provide a phase-based account for NPI licensing in Turkish. We aim to refer to the previous research on this field and to propose an alternative account to what remains unexplained by the former accounts, based on our observations and analysis in Turkish.

## 2. Background and the problem

# 2.1. Negative polarity items in Turkish

There are a number of expressions which need to occur within negative contexts or need a negative licenser. Some languages also allow these items in context of conditionals, adversative predicates and questions (Benmamoun 1997; Kelepir 2001; Kumar 2006; Kural 1997; Laka 2013; Mahajan 1990; Vasishth 1999) Such expressions are called negative polarity items and in Turkish they usually appear within negative clauses and some can also appear within affirmative questions without being accompanied by a negation marker (Göksel and Kerslake 2005).

Negative polarity items in Turkish are categorized into three groups by Kelepir (2001) based on their morphological features:

- (a) the adverb *hiç* 'at all, 'never', 'ever';
- (b) the words which begin with hic hickimse 'anybody/nobody', hickimse 'anything/nothing', hickimse 'any X/no X';
- (c) the words without hic kimse 'anybody/nobody', asla 'never', sakin 'ever', katiyyen 'in any way'.

There are no negative phrases in Turkish, such as *nobody* in English. Therefore, negative statements like those exemplified below in (1a) and (1b) can only be constructed by NPIs (Kelepir 2001: 121).

- (1a) John **kimse**-yi gör-**me**-di-ø.
  John **anybody**-ACC see-**NEG**-PAST-3SG<sup>1</sup>
  'John didn't see anybody.'
- (1b) \*John kimse-yi gör-dü-ø.
  John anybody-ACC see- PAST-3SG
  '\*John saw anybody.'

Existence of a negation marker in the same sentence is also not enough for NPIs to be licensed. Kelepir (2001: 124, fn:69) argues that NPIs in Turkish in the subject position gets licensed by a clausemate negation:

(2) Kimse gel-**me**-di. anybody come-**NEG**-PERF 'Nobody came.'

She does not specify whether this claim is specific to simple clauses, neither does she include examples with embedded sentences with NPIs. However, since this account specifically suggests clausemate negation, it remains unable to explain such sentences in which the NPIs in the subject position of the embedded clause are clearly licensed by the matrix verb as shown below.

(3) Demet [kimse-yi kitab-ı oku-du diye Demet [anyone-ACC book-ACC read-PERF] that

bil-**mi**-yor-ø. know-**NEG**-PROG-3SG.

'Demet doesn't acknowledge that anyone read the book.'

<sup>1</sup> We employ the following abbreviations in the glosses throughout the study and the glosses of cited examples are arranged accordingly: NOM: nominative, ACC: accusative, DAT: dative, ABL: ablative, GEN: genitive, POSS: possessive, NEG: negation, PROG: progressive, PAST: past, PERF: perfective, TNS: tense, SG: singular, VNOM: verbal nominalizer, EVID: evidentiality.

In (3) the embedded clause with the NPI in the subject position lacks verbal agreement and tense, thus it is a defective domain, which does not form a phase as explained in more detail in the analysis section. Due to the non-finite nature of the embedded clause, the embedded  $\nu$ P containing the NPI remains accessible to the matrix verb and the derivation yields grammaticality. This might implicate that we do not always need a clausemate negation for NPIs in the subject position. Moreover, NPIs that are lower within the derivation, such as the ones in the indirect object position, i.e. within the embedded VP, also display a similar situation as we illustrate below.

(4) Demet [sen-i kimse-ye kitab-1 ver-di] diye Demet [you-ACC anyone-DAT book-ACC give-PERF] that bil-mi-yor-ø. know-NEG-PROG-3SG.

'Demet doesn't acknowledge that you gave the book to anyone.'

In (4), the NPI in the embedded VP remains accessible to the matrix verb due to the non-finite nature of the embedded clause, quite the same way as can be observed in (3). This implies that NPI licensing might not depend on clausemateness, but it might be linked to finiteness.

Another account on NPI licensing in Turkish is proposed by Kornfilt (1984, 1997). She argues that the type of the nominalizer in the embedded clause determines whether NPI licensing from the matrix clause is possible or not. She proposes that factive clauses (namely, clauses including the verbal nominalizer {-DIK}) block long-distance NPI licensing, whereas embedded clauses including another verbal nominalizer {-mA(K)} provide a more transparent domain for long-distance NPI licensing, as in (5).

(5a)<sup>2</sup> **Kimse**-nin [geç gel-me-si] -ni iste-**me**-di-ler. **Nobody**-GEN [late come-VNOM-POSS.3SG] -ACC want-**NEG**-PAST-3PL 'They didn't want anybody that anybody should come late.'

(Kornfilt 1984: 143)

<sup>2</sup> A few things regarding the cited examples might need some clarification, since we remained loyal to the way they were bracketed and glossed, which is done slightly differently in this paper. First of all, in (5a), the NPI marked with GEN is the subject of the subordinate clause and the 3PL subject of the main clause is dropped, however it is morpholoically realized on the matrix verb as could be seen. Secondly, the reason why the subordinate clause in (5b) is marked ACC whereas there is no case marking on the subordinate clause in (5c) is that the matrix verb of those sentences

(5b) Hasan [hiçbiryer-e git-mek] iste-me-di-ø.

Hasan [not anv place-DAT go-VNOM] want-NEG-PAST-3G.

Literal: 'Hasan didn't want to go anywhere.' Intended: 'Hasan wanted not to go anywhere.'

(Kornfilt 1997: 127)

(5c) \*Ahmet'in [kimse-yi sev-diğ-i] -ni Ahmet-GEN [anybody-ACC love-VNOM-POSS.3SG] -ACC hatırla-ma-dı-lar.

remember-NEG-PAST-3S

'They didn't remember that Ahmet doesn't love anybody.'

(Kornfilt 1984: 143)

(5d) ??/\*Hasan [hiçbiryer-e git-tiğ-i]-ni Hasan [not any place-DAT go-VNOM-POSS.3SG]-ACC

söyle-**me**-di-ø.

'Hasan didn't say that he went anywhere.'

(Kornfilt 1997: 127)

However, to the best of our grammatical judgement, the sentences illustrated in (5c) and (5d) are in fact grammatical, suggesting that the embedded clauses constructed by {-DIK} does not block the licensing of the embedded NPI by the matrix predicate. Similar to (3) and (4), the embedded clauses in (5) also lacks tense and verbal agreement due to the fact the bracketed clauses bear nominal agreement, making it a transparent domain accessible to the matrix predicate.

Another proposal regarding NPI licensing is by Kural (1997)<sup>3</sup>, arguing that the observation that negation attached to the verb can license an NPI in the subject position provides evidence for the c-command relationship between the verb and the subject. Thus, implying that NPI licensing takes place within the frame of asymmetrical c-command (Kural 1997: 502), as in (6).

simply require different case markings. For further examination of these structures, one should see their original source as cited under each example.

<sup>&</sup>lt;sup>3</sup> The main focus of Kural (1997) is linearization and the NPI data in the study is presented as counter-data to Kayne (1994)'s Linear Correspondance Axiom. Therefore, it would be unfair to say that Kural (1997) makes direct implications as to NPI licensing in Turkish, yet his data is still relevant to this study since it implies that NPIs are licensed under c-command relationship.

- (6a) \*Kimse uyu-du-ø.
  nobody-NOM sleep-PAST-3SG
  Intended: 'No one slept.'
- (6b) Kimse uyu-ma-dı-ø.
  nobody-NOM sleep-NEG-PAST-3SG
  'No one slept.'

Yet, the observation that a negated verb in the matrix clause, which naturally ccommands the embedded clause in the sentence, is unable to license an NPI in the embedded clause in certain cases as exemplified below shows that this analysis is not adequate:

(7) \*Demet [sen kitab-1 kimse-ye ver-di-n]
Demet [you-NOM book-ACC anybody-DAT give-PAST-2SG]
san-mi-yor-ø.
think-NEG-PROG-3SG
'Demet doesn't think that you gave the book to anyone.'

The sentence above is ungrammatical although the negation in the matrix clause occupies a position that is able to c-command the embedded clause in which the NPI holds the indirect object position. The reason why the c-command relationship does not seem to work as expected here can be explained within the framework of the Phase Theory (Chomsky 2001 and forth) overviewed in the next section. Since the derivation takes place phase by phase and the phases spelled out are no longer accessible to the rest of the derivation, the embedded clause of (7) is not accessible to the matrix verb, therefore the c-command relationship between the matrix verb in the higher position and the NPI within the embedded clause does not remain valid after spell-out.

The evaluation of the former accounts above regarding NPIs shows us that there is no integrated analysis with regard to NPI licensing. The clausemateness condition discussed by Kelepir (2001) cannot explain the grammaticality of (3), the nominalizer restraint proposed by Kornfilt (1997 and 1984) seems to be based on grammatical judgements with which native speakers of Turkish do not agree, and lastly, the asymmetrical c-command account discussed by Kural (1997) does not provide a sufficient analysis as shown in (7). Therefore, a holistic analysis to NPI licensing remains non-existant at this point. The purpose of

this study is to provide such an account within the Phase Theory and multiple spell-out.

## 2.2.(An overview on) phases and multiple spell-out

Following the Minimalist Program (Chomsky 1993, 1995) and the following works (Chomsky 2000, 2001, 2008), the main issue in syntax has remained the same, namely, to untangle the "perfectly efficient" system called language. Since the faculty of language clearly is a part of our cognition, then the process of derivation must face certain restrictions with regard to our working memory. Works prior to Chomsky (1995) assumed that the derivation of a sentence took place at one fell swoop and all the operations were kept in the working memory throughout the derivation, thus increasing the burden on the working memory. However, the Phase Theory argues that the derivation takes place in separate computational cycles called *phases* instead of a single string of operations. Each phase is composed of constituents chosen from a separate lexical subarray, then sent to the PHON and SEM interfaces once completed. Thus, the computational burden on the working memory is avoided. Chomsky (2008) states that CPs and transitive vPs form phases<sup>4</sup>. The complement of the phase head is the spell-out domain of the phase in question. Namely, the spell-out domains of CP and vP are TP and VP respectively. The specifier positions of a phase are considered edge positions which remain outside of the spell-out domain, therefore allowing transphasal operations such as agreement and movement out of a phase. The phase head transfers its φ-features to the next c-commanded head through feature inheritance, thus the constituent moved to the spec position of the head which inherits the said φ-features, can get its features valued. While interpretable features enter the derivation already valued, the uninterpretable features need to be valued by feature valuation, because the interfaces can only interpret valued features and any feature left unvalued would cause the derivation to crash (Hornstein, Nunes and Grohmann 2005). Once a phase is complete and its spell-out domain is sent to the interfaces, it becomes inaccessible to the rest of the derivation. Therefore, the on-going derivation cannot operate on the contents of the spelled-out domain any more (Chomsky 2000). This is called The Phase Impenetrability Condition, as seen described below:

<sup>&</sup>lt;sup>4</sup> Chomsky (2008) also remarks that DPs may form phases as well, since phases have propositional value. Svenious (2004) and Hiraiwa (2005) also suggest that DPs and CPs have parallel structures, therefore DPs may be phases.

(8) Phase Impenetrability Condition<sub>1</sub> (Chomsky 2000: 108)
The domain of H<sup>0</sup> is not accessible to operations outside HP; only H and its edge are accessible to such operations.

However, the first version of PIC was reviewed due to some empirical discussions. One of these reasons was that the intransitive  $\nu P$  displays the same behavior as the transitive  $\nu P$  when PIC<sub>1</sub> is followed. Although this discussion was dismissed by the introduction of weak and strong phases (Chomsky 2001: 12), it did not solve the problem since operations such as reconstruction would require the intransitive (passive/unaccusative)  $\nu P$  (introduced as a weak phase at that point) to have an edge position, which again was a feature of strong phases (Richards 2010). Moreover, PIC<sub>1</sub> was insufficient to explain phenomena such as agreement across a phase in Icelandic dative subject-nominative object structures (Taraldsen 1995; Sigurdsson 1996 cited by Richards 2010). As shown below Richards (2010: 5), the agreement between the T<sup>0</sup> and the in-situ nominative object indicates agreement across a transitive  $\nu P$ , as in (9).

- (9a)  $\operatorname{Her}_{DAT} [_{\nu P} \text{ bored.3pl } [_{DP} \text{they}_{NOM}]]$
- (9b) AGREE(T, they)  $\rightarrow$  [T[ $\varphi$ , (EPP)] ... DP[ $\varphi$ , Case]]

To be able to account for such longdistance agreement, as well as the structural differences between the transitive and the intransitive vP, a second version of PIC was proposed:

(10) Phase Impenetrability Condition<sub>2</sub> (Chomsky 2001: 13) Elements of HP are accessible to operations within the smallest strong ZP phase but not beyond.

This new version indicates that spell-out of the previous phase is triggered by the insertion of the next strong head, therefore the content of the spell-out domain still remains accessible to the next strong phase after the completion of the phase it belongs to. The main difference of this new version is that the  $C^0$  now has a more extended lexical subarray that is shared with  $v^0$ , whereas it used to share a lexical subarray with only  $T^{0.5}$ 

<sup>&</sup>lt;sup>5</sup> One should acknowledge that under the assumption of feature inheritance as presented in Chomsky (2000, 2001), the difference between the two version of PIC becomes rather trivial, since T0has to inherit features from the C0 head, and therefore cannot do anything until C0 is merged

Therefore, the analysis made in this study follows  $PIC_2$ , not only due to the reasons stated above but also some implications which will be discussed later in the following sections. Following Chomsky (2001) on feature valuation and Yamashita (2003) on the probe-goal relation between the negation and the NPI, we assume that NPIs are licensed within the frame of local AGREE operation.

## 2.3. Phasal status of NegP

The reader might question the phasal status of the NegP since it holds great importance with regard to the content and the timing of the spell-outs, which are the backbones of the current analysis. Akahane (2006) argues that NegP should be identified as a phase when its head has a valued feature (± Neg) before spell-out. Regarding the phasehood of NegP, he follows Chomsky's hypothesis that phases correspond to propositions and since NegP contains vP which corresponds to a proposition, he argues that it is likely for NegP to correspond to a proposition as well. Therefore, he indicates that, from a semantic point of view, NegPs should be perceived as phases (for a similar claim, see also Błaszczak 2008). Following Takahashi (2002), Akahane (2006) further argues that there is phonological evidence supporting the phasehood of NegP. He follows Takahashi's (2002) argument that ellipsis requires the elided site to be the complement of a phase head (the example cited above from Akahane (2006) was originally cited in Ross (1969)), as in (11).

(11) [CP C [TP he is writing something]], but you can't imagine [CP why C [TP he writing something]]]

'He is writing something, but you can't imagine why.'

(Akahane 2006: 323)

Akahane (2006) suggests that, similar to the example above, the complement domain of a NegP (namely, vP dominated by NegP) can be elided. Therefore, NegP displays a characteristic of a phase, as in (12).

(12) [CP C [TP My car [NegP [vP pass the smog test]]] but Henry's did [NegP not [vP pass the smog test]]]]

'My car passed the smog test but Henry's did not.'

(Akahane 2006: 324)

<sup>(</sup>Richards 2007). If one were to assume the Feature Inheritance Mechanism, then there would remain no need to further assume PIC1 or PIC2.

Although, Akahane's (2006) conceptual argument makes sense, his empirical evidence does not hold the same way in Turkish:

- (13a) [NegP[vP] Ali dedikodu yapmış] **değil**]
  Ali gossip make-EVID **NEG**'It is not the case that Ali gossiped.'
- (13b) \*Murat dedikodu yapmış Murat gossip make-EVID  $\text{ama } \left[ \text{TP Ali } \left[ \text{NegP} \left[ \text{vP Ali dedikoduyapmış} \right] \right] \right] \text{değil } \right] \text{T}^0 ]$  but Ali NEG

Intended: 'Murat gossiped but Ali did not.'

As can be observed above, the ellipsis of the *vP* dominated by the NegP leads to ungrammaticality. This may have two implications. The first possibility that comes to mind is that the ellipsis of the *vP* in Akahane (2006) might be the result of different mechanisms and not a direct characteristic of phasehood. One could also follow Potsdam (1997) here, who formulates the VP-Ellipsis Licensing Condition suggesting that an elided VP must be the complement of a morphologically realized head and accordingly argues that *not* seems to be the only possible licenser of a VP in a negated subjunctive clause in English and therefore the only possible head projecting to NegP. Following that remark, the ellipsis observed by Akahane (2006) might merely be a result of the head status of the negation marker and not necessarily a result of phasehood. The second possibility is that NegP in English displays phasal properties, whereas NegP in Turkish does not.

It is essential to mention that the most commonly used sentential negation marker in Turkish is the suffix {-mA} and it is morphologically realized on the verb, however we used the sentencial negation marker *değil* to mimic Akahane's (2006) test, since the suffixal negation {-mA} is a result of morphosyntactic processes and it cannot be omitted to conduct phasal diagnostics (i.e. movement like operations, quantifier raising etc.) unlike *değil*, which an independent lexical item. Despite this difference, both negation markers can license NPIs in the same fashion, as in (14).

(14a) **Kimse** böye bir şey duy-**ma**-mış-ø. Anybody such a thing hear-**NEG**-EVID-3SG. 'Nobody heard such thing.'

- (14b) **Kims**e böyle bir şey duy-muş **değil-**ø. **anybody** such a thing hear-EVID **NEG-3**SG

  Intended: 'It is not the case that anybody heard such thing.'
- (14c) Ali [kimse-nin kendisi-ne yalan Ali [anybody-GEN himself-DAT lie söyle-diğ-i] -ni düşün-me-miş-ø. tell-PERF-VNOM-POSS.3SG] -ACC think-NEG-EVID-3SG 'Ali didn't think that anyone lied to him.'
- (14d) Ali [kimse-nin kendisi-ne yalan Ali [anybody-GEN himself-DAT lie

söyle-diğ-i] -ni düşün-müş **değil**-ø. tell-PERF-VNOM-POSS.3SG] ACC think-EVID **NEG-**3SG

'It is not the case that Ali thought that some has lied to him.'

Based on the discussion here, we do not consider NegP to be a phase throughout this paper, since this test fails to yield strong results as to the phasehood of NegP. Moreover, the assumption that NegP might be a phase seems to create no difference in our analysis. Let us investigate a sentence pair, which we will return to in the analysis and discussion section later (*see* (25)), in order to demonstrate how a possible NegP phase does not change the grammaticality rendition that we get from the examples presented to point out our argument, as in (15).

(15a)  $\begin{bmatrix} CP1 \end{bmatrix} \begin{bmatrix} VP1 \end{bmatrix} Demet \begin{bmatrix} VP1 \end{bmatrix} \begin{bmatrix} CP2 \end{bmatrix} \begin{bmatrix} VP2 \end{bmatrix} \begin{bmatrix} VP2 \end{bmatrix}$  Demet-NOM **anybody**-ACC

[VP2 kitab-1 oku-ma-d1]] diye] bil-iyor-ø]]] book-ACC read-NEG-PERF that know-PROG-3SG 'Demet acknowledges nobody to have read the book'

- (1) The verb *oku*-merges with the direct object *kitab-i* to create the embedded VP:  $[VP2DP_{ACC} V_2]$
- (2)  $v^0$  merges:  $[v_{P2}[v_{P2} DP_{ACC} < V_2 >] V_2^0 v^0]$
- (3) The NPI subject of the complement clause merges: [ $_{\nu P2}$  NPI $_{ACC}$  [ $_{VP2}$  DP $_{ACC}$ < $^{V}_{2}$ >]  $V^{0}_{2}$ - $v^{0}$ ]

- (4) The direct object *kitab-i* moves to spec, vP to get its case valued:  $[_{vP2}DP_{ACC}[_{v}, NPI_{ACC}]_{VP2} < DP_{ACC} > < V_{2} > ] V^{0}_{2} v^{0}]$
- (5) Neg<sup>0</sup> merges and the verb raises to Neg<sup>0</sup> to bear negation and becomes 'okuma-'<sup>6</sup>: [NegP[vP<sub>2</sub> DP<sub>ACC</sub>[v, NPI<sub>ACC</sub> [vP<sub>2</sub><DP<sub>ACC</sub>><V<sub>2</sub>>] <V<sup>0</sup>>-V<sup>0</sup>-NEG<sup>0</sup>]
- (6) With the completion of NegP, the first spell-out takes place.  $SD^7$ :  $[_{VP2} < DP_{ACC} > < V_2 >]$

Since the NPI within the embedded *vP* is not in the first spell-out domain and it gets licensed as soon as the NegP is complete, this sentence is correctly rendered as grammatical even under the assumption that NegP constructs a phase. The reader might think that this result is expected, since the negation and the NPI are in the same clause. Let us see how the derivation would proceed when these two are in different clauses:

(15b)  $\begin{bmatrix} CP_1 \end{bmatrix}_{\nu P_1}$  Demet  $\begin{bmatrix} VP_1 \end{bmatrix}_{CP_2} \begin{bmatrix} VP_2 \\ \nu P_2 \end{bmatrix}$  Demet-NOM **anybody**-ACC

[VP2 kitab-1 oku-du]] diye] bil-**mi**-yor-ø]]] book-ACC read-PERF that know-**NEG**-PROG-3SG

'Demet doesn't acknowledge anybody to have read the book.'

- (1) The direct object *kitab-i* and the verb 'oku-' merge, forming the VP: [VP2]  $DP_{ACC} V_2^0$
- (2)  $v^0$  head merges:  $[v_{P2} \ [V_{P2} \ DP_{ACC} < V^0_2 >] \ V^0_2 v^0]$
- (3) The subject *kimse-yi* merges:  $[_{vP2} NPI_{ACC} [_{vP2} DP_{ACC} < V^0_{2} >] V^0_{2} v^0]$
- (4) The direct object *kitab-i* raises to Spec, vP to get its case valued and the vP is complete:  $\begin{bmatrix} vP_2 & DP_{ACC} & vP_{ACC} 

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<sup>&</sup>lt;sup>6</sup> On V0-v0-NEG0-T0 movement in our analysis, we adopt Matushansky's (2006) approach of head movement, since the standard head adjunction suggests that once the NEG is moved, it no longer c-commands its extraction site, therefore not being able to c-command the NPI below. She argues that head movement is a combination of movement (a syntactic operation) and m-merge (a morphological operation) that follows it. The movement operation targets the root of the tree and creates a specifier of the attracting head. The m-merge, on the other hand, creates feature bundles on a morphological level. Following Mathushansky (2006) in our NPI licensing scenario, the first component of head movement (i.e. the syntactic movement) that carries the verb from V0 to T0 through v0 and NEG0 licenses the NPI since it does c-command the NPI below and then the complex T head is composed later in the morphological component.

<sup>&</sup>lt;sup>7</sup> Spell-out domain.

- (5) T<sup>0</sup> merges and the verb *oku* raises to T<sup>0</sup> as well as the subject *kimse* to feed the EPP:  $[_{TP2} NPI_{ACC} [_{\nu P2} DP_{ACC} [_{\nu'} < NPI_{ACC} [_{VP2} < DP_{ACC} > < V^0_2 >] < V^0_2 > < v^{\theta} > ]] V_{2}^{0} - v^{\theta} - T^{0}]$
- (6)  $C_{\text{def}}^{0}$  merges, yet the first spell-out has to wait until the next phase is complete since the C<sup>0</sup> in question is defective:  $[CPdef2[TP2]NPI_{ACC}]_{vP2}DP_{ACC}[v^{*}]$   $< NPI_{ACC} > [VP2 < DP_{ACC} > < V^{0}_{2} > ] < V^{0}_{2} > - < v^{0}_{2}] V^{0}_{2} - v^{0}_{2} - T^{0}] diye C^{0}_{def}]$
- (7) The matrix verb *bil* and the  $CP_{def2}$  merge, forming the  $VP_1$ :  $[_{VP1} CP_{def2} V_1^0]$  (8)  $v^0$  merges and the verb raises to  $v^0$ :  $[_{VP1} CP_2 < V_1^0 > ] V_1^0 v^0]$
- (9) The matrix subject *Demet* merges:  $[vP1Demet_{NOM} [vP1CP_2 < V_1^0 >] V_1^0 v^0]$
- (10) The ACC marked NPI subject of the embedded CP<sub>def2</sub> raises to spec, vP<sub>1</sub> to get its case valued and the vP<sub>1</sub> is complete: [vP1 NPIACC [vDemetNOM [VP1  $CP_{2} < V_{1}^{0} > |V_{1}^{0} - v^{0}|$
- (11) Neg<sup>0</sup> merges and the matrix verb raises to Neg<sup>0</sup> to bear negation and become 'bilme-': [NegP[vP1 NPIACC [vDemetNOM [VP1 CP2<V10>] <V10>- $< v^0 > ||V_1^0 - v^0 - NEG^0||$
- (12) With the completion of NegP, finally the first spell out takes place. SD:  $[VP2 < DPACC > < V^0 > ]$

At this point the NPI sitting in the spec, vP of the matrix clause is still accessible to the Neg<sup>0</sup>, therefore the sentence is rendered grammatical as expected (compare with (25)). Since we have shown that phasal status of NegP does not create a difference in our analysis and we do not find the evidence proposed in favor of NegP being a phase strong enough, we will proceed with the assumption that it does not display phasehood throughout our analysis.

# Analysis and discussion

In this section, we will examine how NPIs in full and defective embedded clauses/CPs are licensed. The intended meaning with the term "defective" is that the C heads in question are not  $\varphi$ -complete, namely they lack one or more of the φ-features including agreement, tense, aspect or modality (Chomsky 2001). In this case, our probe, the C<sup>0</sup> head is unable to delete unvalued agreement; hence, the lack of verbal agreement and the existence of ACC marked subjects. Before we proceed to our analysis, it seems necessary to provide a general background and overview regarding complement clauses in Turkish, since the phase analysis presented below depends on properties of these clauses. Sener (2008) divides complement clauses in Turkish into groups based on whether they are constructed with an overt complementizer *dive* 'that') or not. He observes that overtly

headed embedded CPs are selected as complements by verbs of cognition such as düşün- 'think' and bil- 'know, suppose, acknowledge', whereas null headed embedded CPs are selected as complements by verb of belief, such as san-'suppose, consider'. He further points out that these two types of embedded CPs display complete structural parallelism, such that both types can have subjects marked with ACC or NOM under the same conditions. In both null and overtly headed complement clauses, morphologically realized agreement on the predicate of the embedded clause is obligatory when the subject is marked NOM and such agreement seems optional when the subject is marked ACC. Keeping this parallelism in mind, Sener (2008) argues that the reason why ACC marked subjects are allowed to appear in overtly headed complement clauses with morphologically realized agreement on the predicate is that they go through topicalization and therefore raise to the highest edge position of their clause, making it possible for the matrix verb to overwrite their originally NOM assigned case. In our analysis, we will use overtly headed complement clauses with both NOM and ACC marked subjects. The reader might question whether CPs that are not null headed (namely, CPs with *dive*) also can compose a transparent domain, similar to null headed CPs. Given that Sener (2008) comes to the conclusion that these two kinds of complement clauses are structurally identical, one would expect that they would display same the parallelism with regard to composing a transparent domain when they lack one or more φ-features. Özgen and Aydın (2016) provides strong evidence that overtly headed CPin fact do form transparent domains, provided that they are ECM (exceptional case marking) structures lacking tense, following the Principle A, which suggests that an anaphor must be interpreted by an antecedent within its accessible phase. Özgen and Aydın (2016) observes that anaphors in root clauses cannot be interpreted by the matrix subject, whereas ECM structures with overt C<sup>0</sup> heads can:

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(16a) *Ali<sub>i</sub> [biz kendi-n-den<sub>i</sub> kork-uyor-du-k]
Ali we self-3SG-ABL frighten-PROG-PAST-1PL
diye bil-iyor- ø.
that know-PROG-3SG
(literal) *'Ali considers that we were afraid of himself."
(Özgen and Aydın 2016: 310)
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As seen above, a full finite CP headed by *diye* does not allow anaphor binding between the embedded clause and the matrix clause since it forms a phase. However, this is again not the case with ECM structures headed by *diye*:

- (17a) Ali<sub>i</sub> [biz-i kendi-n-den kork-uyor] diye bil-iyor-ø.
  Ali we-ACC self-3SG-ABL frighten-PROG that know-PROG-3SG
  'Ali considers us to be afraid of him.'
- (17b) Ali<sub>i</sub> [biz-i kendi-n-den<sub>i</sub> kork-uyor-uz] diye bil-iyor-ø. Ali we-ACC self-3SG-ABL frighten-PROG-1PL that know-PROG-3SG 'Ali considers us to be afraid of him.'

(Özgen and Aydın 2016: 309)

Based on the evidence presented above, we will consider overtly headed ECM clauses a transparent area if they lack tense. Moving on to our analysis, first, we will analyze a pair of sentences in which the NPI is the subject of the full finite embedded CPs and licensed with nom. The analysis of this pair will provide us a perspective on whether the NPI occupying the edge position (i.e. Spec,vP) will make a difference regarding its accesibility to the matrix verb. Next, we will proceed to examine a pair where the NPIs are again in the subject position, yet this time in defective CPs and marked with acc. This test will show us whether the phasehood of CP is effective when it comes to the long-distance licensing of the NPIs. Lastly, we will discuss a pair in which the NPIs are the indirect objects of the embedded clauses and marked with DAT case. One of the embedded clauses containing the NPIs is a defective CP, and the other is a finite one which displays the characteristics of a phase. The indirect object position of the NPI, along with the contrast between a defective and a finite embedded clause will provide us a situation in which we can examine whether VP internal position (where the indirect object merges) based on the fact that the spell-out process will affect the licensing of the NPI in question. We will not include any sentences in which the NPIs in the embedded clauses are direct objects, since the direct objects would raise to Spec, vP to value their ACC case and the position of the NPI would be identical to that in a subject position, such sentences would not give us anything different than what we get by examining (24) and (25). Without further ado, we would like to clarify why ACC marked objects raise to get their case valued, as can be observed in the 4th step of example (24a) below. İşsever (2007) suggests the raising of the ACC marked object to Spec, vP is merely case driven. He starts off with comparing bare objects to ACC marked objects and shows that the DPs that bear structural case must be raised in Turkish, whereas DPs bearing internal case need not.

- (18a) Bu yıl çocuk-lar sinema-ya çok (sinema-ya) git-ti-ø.

  This year kid-PL cinema-DAT a lot (cinema-DAT) go-PAST-3SG

  'This year, kids went to the cinema a lot.'
- (18b) Ali küçük-ken merdiven-den çok (merdiven-den) düş-tü-ø. Ali young-when stairs-ABL a lot (stairs-ABL) fell-PAST-3SG 'Ali fell down the stairs a lot when he was young.'
- (19) Ali kitab-ı hızlı (\*kitabı) oku-du-ø. Ali book-ACC fast (\*book-ACC) read-PAST-3SG 'Ali read the book fast.'

(İşsever 2007: 5)

Moreover, he cites Erguvanlı's (1984) example to show that bare DPs with no case assigned cannot be moved, whereas DPs with structural case are ungrammatical if left at their base generated spot and not raised to Spec,  $\nu$ P.

- (20a) Ali hızlı kitap oku-yor-ø. Ali fast book read-PROG-3SG 'Ali reads (books) fast.'
- (20b) \*Ali kitap<sub>i</sub> hızlı *t*<sub>i</sub> oku-yor-ø.
  Ali book fast read-PROG-3SG
  'Ali reads (books) fast.'

(Erguvanlı 1984)

- (21a) \*Ali hızlı bukitabı oku-yor-ø.
  Ali fast this book read-PROG-3SG
  'Ali reads this book fast.'
- (21b) Ali bu kitab $_i$  hızlı  $t_i$  oku-yor-ø. Ali this book fast read-PROG-3SG 'Ali reads this book fast.'

(Erguvanlı 1984)

Another example that backs up the claim that the DP raises to get its ACC case valued comes from presentational and contrastive focus. İşsever (2007) follows Kahnemuyipour (2004) that the highest constituent bearing [+focus] within the phasal domain receives the sentential focus. He uses low adverbs to make his point across, since focused adverbs determine the edge of the stress domain. A low adverb (appearing at the edge of the VP) does not allow a [-focus] DP following them when they occupy the sentential focal position. Therefore, the bare object needs to raise in order to create contrastive focus:

- (22a) Ali  $[VP \text{ ÇOK}^8 \text{ kitap } [V \text{ okuyor}]]$  (presentational focus) Ali a lot book read-PROG-3SG 'Ali reads (books) a lot.'
- (22b) \*Ali [VPÇOK KİTAP [V okuyor]]
  Ali a lot book read-PROG-3SG
  'Ali reads (books) a lot.'
- (22c) Ali  $[V_PK\dot{I}TAP_i][V' cokt_i[V okuyor]]]$  (contrastive focus) Ali book a lot read-PROG-3SG 'Ali reads (books) a lot.' (İssever 2007: 8)

ACC marked DPs, however, cause ungrammaticality if not raised from their based generated Spec, VP position whether they bear [-focus] or [+focus]:

- (23a) \*Ali [VP ÇOK kitabı [Vokuyor]]
  Ali a lot book-ACC read-PROG-3SG
  Intended: 'Ali reads the book a lot.'
- (23b) Ali [vPkitab1 [vP ÇOK [vti okuyor]]] (presentational focus) Ali book-ACC a lot read-PROG-3SG 'Ali reads the book a lot.'

(İşsever 2007: 8)

Note that, in (23b) the ACC marked object does not bear contrastive focus, despite that it resembles (22c) regarding the position to which the object raises. The low adverb *cok* bears presentational focus due to being at the highest posi-

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<sup>&</sup>lt;sup>8</sup> Constituents with the [+focus] feature are written in capital letters.

tion of the VP. Therefore, the spec, vP position to which the ACC marked object raises is not driven by specificity, but must be driven by case reasons.

After clarifying the issue of ACC marked objects raising to spec, vP in Turkish, now we will take a look at how long-distance NPI licensing is affected by the position of the NPI in the structure as well as the timing of the spell-outs, examining the sentence pairs (24), (25) and (26) respectively:

(24a)  $\begin{bmatrix} \text{CP1}[\nu \text{P1} \\ \text{Demet} \end{bmatrix}$  Demet  $\begin{bmatrix} \text{VP1} \\ \text{CP2} \end{bmatrix}$   $\begin{bmatrix} \text{CP2} \\ \text{VP2} \end{bmatrix}$  **kimse** $\begin{bmatrix} \text{VP2} \\ \text{NOM} \end{bmatrix}$  **kitab-1 anybody-**NOM book-ACC

oku-**ma-**dı-ø]] diye] bil-iyor-ø]]] read-**NE**G-PAST-3S that know-PROG-3SG

'Demet acknowledges nobody to have read the book.'

(24b)  $*[_{CP1}[_{\nu P1}]$  Demet  $[_{VP1}[_{CP2}][_{\nu P2}]$  kimse  $[_{VP2}]$  kitab-1 Demet-NOM anybody-NOM book-ACC

oku-du-ø]] diye] bil-**mi**-yor-ø]]] read-PAST-3SG that know-**NEG**-PROG-3SG

'Demet doesn't acknowledge anybody to have read the book.'

As seen above, the embedded clauses (24a) and (24b) are both full CPs; thus constituting a phase, with tense and NOM subjects. The clausemateness account aforementioned in the background makes a correct prediction so far, as can be clearly seen from the grammaticality of (24a) and the ungrammaticality of (24b). Now, let us look into how the embedded clauses in (24a) and (24b) are derived, and start off with (24a) to observe a well-formed sentence first, to be able to compare it with its ungrammatical counterpart:

(24a)  $[_{CP1}[_{\nu P1}]$  Demet  $[_{VP1}]$   $[_{CP2}[_{\nu P2}]$  **kimse** $[_{VP2}]$  kitab-1 **anybody-**NOM book-ACC

oku-**ma-**dı-ø]] diye] bil-iyor-ø]]] read-**NE**G-PAST-3S that know-PROG-3SG

- (1) The direct object *kitab-i* and the verb *oku-* merge, forming the VP: [VP2]  $DP_{ACC}$   $V_2^0$
- (2)  $v^0$  head merges:  $[_{v P2} \ [_{VP2} \ DP_{ACC} < V^0_2 >] \ V^0_2 v^0]$

- (3) The direct object *kitab-ı* raises to Spec,  $\nu P$  to get its case valued:  $[_{\nu P2} DP_{ACC} < V^0_2 >] V^0_2 v^0]$
- (4) The subject *kimse* merges:  $[_{vP2} NPI_{NOM}]_{v}$ ,  $DP_{ACC} [_{VP2} < DP_{ACC} > < V_{2}^{0} >] V_{2}^{0} V_{2}^{0}$
- (5) Once the vP is complete, the Neg<sup>0</sup> merges and the verb raises to bear negation to become *oku-ma*:  $[_{NegP} [_{vP2} NPI_{NOM} [_{v}, DP_{ACC}] [_{VP2} < DP_{ACC}) < V^{0}_{2} >] V^{0}_{2}-v^{0}]-v^{0}-NEG^{0}]$

At this point, the verb raised to Neg<sup>0</sup>licenses the NPI before it is seen to spellout and the derivation proceeds on without an obstacle.

- (1) The direct object *kitab-i* and the verb *oku-* merges, forming the VP: [VP2]  $DP_{ACC}$   $V^0_2$
- (2)  $v^0$  head merges:  $[v_{P2}][v_{P2}DP_{ACC} < V^0_2 > ]V^0_2 v^0]$
- (3) The direct object *kitab-i* raises to Spec,vP to get its case valued:  $\begin{bmatrix} v_{P2} DP_{ACC} \\ v_{P2} DP_{ACC} \end{bmatrix} V_2^0 V_2^0 V_2^0 V_2^0$
- (4) The subject *kimse* merges and the vP is complete:  $[_{vP2} NPI_{NOM} [_{v'} DP_{ACC} [_{VP2} < DP_{ACC} > < V^0_2 >] V^0_2 v^0]]$
- (5) T<sup>0</sup> merges and the verb *oku* raises to T<sup>0</sup> as well as the subject *kimse* to feed the EPP<sup>9</sup> and to get its nominative case valued:  $[_{TP2} \text{ NPI}_{NOM} [_{\nu P2} < \text{NPI}_{NOM} > [_{\nu'} \text{ DP}_{ACC} [_{VP2} < \text{DP}_{ACC} > < \text{V}^0_2 >] < \text{V}^0_2 > < \text{v}^0 >]] \text{ V}^0_2 \text{v}^0 \text{T}^0]$
- (6)  $C^0$  merges:  $[_{CP2}[_{TP2} NPI_{NOM} [_{\nu P2} < NPI_{NOM} > [_{\nu'} DP_{ACC} [_{VP2} < DP_{ACC} > < V^0_2 >] < V^0_2 > < \nu^0 >]] V^0_2 \nu^0 T^0] diye <math>C^0$ ]
- (7) With the completion of the CP, the first spell-out takes place. SD:  $[_{VP2} < DP_{ACC} > < V^0_2 >]$

<sup>9</sup> We adopt the remark in the literature that agreement takes place within locality relation, thus we premise that the subject raises from Spec, vP to Spec, TP in order to get its case valued. (see Chomsky 1993; Chung 1998; Koopman 1992, 1995, 2001; Sportiche 1998, among others). Although, it has been pointed out that this assumption is challenged in the syntactic literature of Turkish (Öztürk 2005; Şener 2011), whether the subject is merged at Spec, vP or Spec, TP constitutes no difference or importance for our analysis since both positions will be spelled-out at the same time under the assumption of PIC2. Thus, we remain agnostic to this discussion.

- (8) The matrix verb *bil* and the CP<sub>2</sub> merge, forming the VP<sub>1</sub>: [ $_{VP1}$  CP<sub>2</sub> V<sub>1</sub><sup>0</sup>] (9)  $\nu^0$  merges and the verb raises to  $\nu^0$ : [ $_{VP1}$  [ $_{VP1}$  CP<sub>2</sub><V<sub>1</sub><sup>0</sup>>] V<sub>1</sub><sup>0</sup>- $_{V}$ 0]
- (10) The matrix subject *Demet* merges and the  $vP_1$  is complete:  $[vP_1]$  Demet<sub>NOM</sub>  $[VP1 CP_2 < V_1^0 > ]V_1^0 - v^0]$
- (11) Once the matrix vP is complete, the second spell-out takes place. SD: [TP2  $NPI_{NOM} [_{vP2} < NPI_{NOM} > [_{v}, DP_{ACC} [_{VP2} < DP_{ACC} > < V_{2}^{0} > ] < V_{2}^{0} > - < v_{2}^{0} > ]] V_{2}^{0}$  $v^0$ -T<sup>0</sup>]

At the 11th step, the NPI is spelled out before Neg<sup>0</sup> even enters the derivation. thus the derivation crashes.

 $[_{\text{VP1}}\ [_{\text{CP2}}\ [_{\nu\text{P2}}$ kimse-yi (25b) $[_{CP1}]_{vP1}$  Demet [VP2 kitab-1 Demet-NOM anybody-ACC book-ACC

> oku-du]] diye] bil-mi-yor-ø]]] read-PERF that know-NEG-PROG-3SG

'Demet doesn't acknowledge anybody to have read the book.'

The pair above contains defective CPs as embedded clauses, which do not form phases due to defectiveness. Based on our assumption that an NPI needs to be ccommanded by a negation marker at some point of the derivation before spellout, we predict that the NPI will be available to the negation on the matrix verb if the embedded clause does not form a phase. This prediction is borne out by the example (25b) above which is grammatical and (25a) is grammatical without a doubt, as the verb in the embedded clause bears a negation marker, allowing the NPI to be licensed under any condition.

Let us investigate the derivation of (25b) in detail to see whether the derivation takes place in accordance with our assumption above:

(25b) 
$$[_{CP1}[_{\nu P1} \text{ Demet } [_{VP1} [_{CP2} [_{\nu P2} \text{kimse-yi} [_{VP2} \text{ kitab-1}] ]]$$
 Demet-NOM **anybody**-ACC book-ACC oku-du]] diye] bil-**mi**-yor- $\emptyset$ ]]]

#### read-PERF that know-NEG-PROG-3SG

- (1) The direct object *kitab-i* and the verb *oku-* merge, forming the VP: [VP2]  $DP_{ACC}$   $V^0_2$
- (2)  $v^0$  head merges:  $[v_{P2} \ [v_{P2} \ DP_{ACC} < V^0_2 >] \ V^0_2 v^0]$
- (3) The subject *kimse-yi* merges:  $[_{vP2} NPI_{ACC} [_{VP2}DP_{ACC} < V_2^0 >] V_2^0 v_2^0]$
- (4) The direct object *kitab-i* raises to Spec, vP to get its case valued and the vP is complete:  $\begin{bmatrix} vP_2DP_{ACC} \end{bmatrix} \begin{bmatrix} vP_{ACC} \end{bmatrix}$
- (5) T<sup>0</sup> merges and the verb *oku* raises to T<sup>0</sup> as well as the subject *kimse* to feed the EPP:  $[_{TP2} \text{ NPI}_{ACC} [_{vP2} \text{DP}_{ACC} [_{v'} < \text{NPI}_{ACC} [_{VP2} < \text{DP}_{ACC} > < V^0_2 >] < V^0_2 > < v^0 > ]] V^0_2 v^0 T^0]$
- (6)  $C_{def}^{0}$  merges, yet the first spell-out has to wait until the next phase is complete since the  $C^{0}$  in question is defective:  $[C_{Pdef2}]_{TP2} NPI_{ACC} [V_{P2}DP_{ACC}]_{V} < NPI_{ACC} [V_{P2}CP_{ACC}>< V^{0}_{2}>] < V^{0}_{2}> < V^{0}>] V^{0}_{2} V^{0}_{-1} T^{0}] diye C^{0}_{def}$
- (7) NPI<sub>ACC</sub> moves to spec, CP to get its case valued:  $[CPdef2] NPI_{ACC} [TP2] < NPI_{ACC} > [VP2] DP_{ACC} [VP2] CPP_{ACC} > (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2) (V^0_2) | (V^0_2)$
- (8) The matrix verb *bil* and the  $CP_{def2}$  merge, forming the  $VP_1$ : [ $VP_1 CP_{def2} V_1^0$ ]
- (9)  $v^0$  merges and the verb raises to  $v^0$ :  $[_{vP1} [_{vP1} CP_2 < V_1^0 >] V_1^0 v^0]$
- (10) The matrix subject "Demet" merges:  $[v_{P1}Demet_{NOM}[v_{P1}CP_2 < V_1^0 >] V_1^0 v^0]$
- (11) The  $_{ACC}$  marked NPI subject of the embedded  $CP_{def2}$  raises to spec,  $\nu P_1$  to get its case valued and the  $\nu P_1$  is complete:  $[_{\nu P1} \ NPI_{ACC} \ [_{\nu'} \ Demet_{NOM} \ [_{VP1} \ CP_2 < V_1^0 > ] \ V_1^0 \nu^0]]$
- (12) Once the  $vP_1$  is complete, finally the first spell-out takes place. SD:  $[_{VP2} < DP_{ACC} > < V^0_2 >]$
- (13) Neg<sup>0</sup> merges and the verb raises to Neg<sup>0</sup>, where it is able to license the NPI sitting at the Spec,  $\nu P_1$  in the matrix clause:  $[N_{egP}]_{vP1} NPI_{ACC} [\nu^{-}Demet_{NOM}]_{vP1} CP_2 < V_1^0 > ] < V_1^0 > < v^0 > ]] V_1^0 \nu^0 NEG^0]$  ...

At the 13th step, the NPI, which could move to the spec,  $vP_1$  in the matrix clause before being sent to spell-out due the embedded CP's defective nature, gets licensed due to the arrival of Neg<sup>0</sup> and the derivation continues on.

(26a) 
$$*[_{\text{CP1}}[_{\text{VP1}}]$$
 Demet  $[_{\text{VP1}}[_{\text{CP2}}[_{\text{VP2}}]$  sen-i  $[_{\text{VP2}}]$  kitab-1 Demet-NOM you-ACC book-ACC bil-mi-yor-ø]]]. kimse-ye ver-di]] diye]

know-NEG-PROG-3SG. anyone-DAT give-PERF] that

'Demet doesn't acknowledge you to have given the book to anybody.'

(26b)  $*[_{CP1}[_{\nu P1} \ Demet \ [_{VP1} \ [_{CP2}[_{\nu P2}sen \ [_{VP2} \ kitab-1 \ Demet-NOM \ you-NOM \ book-ACC$ 

kimse-ye ver-di-n]] diye] bil-mi-yor-ø]]].
anybody-DAT give-PAST-2SG that know-NEG-PROG-3SG

'Demet doesn't acknowledge that you gave the book to anybody.'

Lastly, we will discuss the sentences above, in which the NPIs occupy the indirect object position of embedded clauses which both lack a negativity marker within them. Since the indirect object marked with DAT case does not raise from its base generated position to a possible escape hatch position, the ungrammaticality of (26b) is predicted, yet the ungrammaticality of (26a) may seem confusing at first glance, given the fact that the embedded clause lacks tense. However, even within a defective CP, Neg<sup>0</sup> and the NPI does not share the same spell out domain. The embedded VP is spelled out as soon as the matrix  $\nu$ P is complete, which is the step before the Neg<sup>0</sup> merges. This shows us that long-distance NPI licensing does not depend on finiteness but it depends on phasemateness.

Let us first take a look at how the NPI in (26a) gets licensed:

(26a) \*[CP1[VP1] Demet [VP1[CP2[VP2Sen-i [VP2 kitab-1]]
Demet-NOM you-ACC book-ACC

bil-mi-yor-ø]]]. kimse-ye ver-di]] diye] know-NEG-PROG-3SG. anyone-DAT give-PERF] that

- (1) The direct object *kitab-i* merges with  $V^0$  *ver-*, forming the VP:  $[_{VP2}DP_{ACC} V^0_{2}]$
- (2) The indirect object kimse-ye merges:  $[_{\text{VP2}} \text{ NPI}_{\text{DAT}} [_{\text{V'}} \text{DP}_{\text{ACC}} \text{ V}^{0}_{2}]]$
- (3)  $v^0$  merges:  $[_{vP2} [_{VP2} NPI_{DAT} [_{V'} DP_{ACC} < V^0_2 >] ]V^0_2 v^0]$
- (4) The direct object raises to Spec,  $vP_2$ : [ $vP_2$  DP<sub>ACC</sub> [ $vP_2$  NPI<sub>DAT</sub> [ $vP_2$  NPI
- (5) The subject merges:  $[_{\text{vP2}} SBJ_{\text{ACC}} [_{\text{v'}} DP_{\text{ACC}} [_{\text{VP2}} NPI_{\text{DAT}} [_{\text{v'}} < DP_{\text{ACC}} > < V^0_2 >]]$  $V^0_2 - v^0]]$

- (7)  $C_{def}^{0}$  merges:  $[CP_{def2} [_{TP2} SBJ_{ACC} [_{vP2} < SBJ_{ACC} > [_{v}] DP_{ACC} [_{VP2} NPI_{DAT} [_{v} < DP_{ACC} > < v^{0}_{2} >]] < v^{0}_{2} > < v^{0}]] V^{0}_{2} v^{0} T^{0}] diye C_{0}]$
- (8) SBJ<sub>ACC</sub> raises to spec, CP<sub>def</sub> to get its case valued: [CP<sub>def2</sub> SBJ<sub>ACC</sub> [<sub>TP2</sub> <SBJ<sub>ACC</sub>> [ $_{\nu}$ P2<SBJ<sub>ACC</sub>> [ $_{\nu}$ P2<SBJ<sub>ACC</sub>> [ $_{\nu}$ P2<PP<sub>ACC</sub> [ $_{\nu}$ PP<sub>ACC</sub> [ $_{\nu}$
- (9) The matrix verb *bil* and the CP<sub>2</sub> merges to form the VP<sub>1</sub>: [ $_{\text{VP1}}$  CP<sub>2</sub> V<sub>1</sub><sup>0</sup>]  $_{\nu}^{0}$  merges: [ $_{\text{VP1}}$  CP<sub>2</sub><V<sub>1</sub><sup>0</sup>>] V<sub>1</sub><sup>0</sup>- $_{\nu}^{0}$ ]
- (10) The subject of the matrix clause merges: [ $_{vP1}$ Demet $_{NOM}$  [ $_{VP1}$  CP $_2$ < $V_1^0$ >]  $V_1^0$ - $v^0$ ]
- (11) The ACC marked subject of the embedded ECM clause raises to spec,  $\nu P_1$  to get its case valued, completing the  $\nu P_1$ : [ $\nu P_1 SBJ_{ACC}$  ]]
- (12) The first spell out takes place, sending the NPI within the embedded VP to spell-out. SD:  $[_{VP2} \text{ NPI}_{DAT} [_{V} < DP_{ACC} > < V^0_2 >]]$

As can be seen above, the NPI is spelled out before Neg<sup>0</sup> merges, causing the derivation to crash.

Lastly, we will examine (26b) step by step:

(26b) \*[CP1[\nuP1] Demet [\nuP1] [CP2[\nuP2] sen [\nuP2] kitab-1 Demet-NOM you-NOM book-ACC kimse-ye ver-di-n]] diye] bil-mi-yor-\varphi]]].

anybody-DAT give-PAST-2SG that know-NEG-PROG-3SG

- (1) The direct object *kitab-i* merges with  $V^0$  *ver-*, forming the VP: [VP2 DP<sub>ACC</sub>  $V^0_2$ ]
- (2) The indirect object kimse-ye merges:  $[VP2 \text{ NPI}_{DAT} [V^{,} DP_{ACC} V^{0}_{2}]]$
- (3)  $v^0$  merges:  $\left[ v_{P2} \right] \left[ v_{P2} \right] \left[ v_{P2} \right] \left[ v_{P3} \right$
- (4) The direct object raises to Spec,  $vP_2$ : [ $vP_2$  DP<sub>ACC</sub> [ $vP_2$  NPI<sub>DAT</sub> [ $vP_2$  NPI
- (5) The subject merges:  $[_{\text{VP2}} SBJ_{\text{NOM}} [_{\text{V'}} DP_{\text{ACC}} [_{\text{VP2}} NPI_{\text{DAT}} [_{\text{V'}} < DP_{\text{ACC}} > < V^0_2 > ]]$  $V^0_{2} - V^0_{1}]$
- (6) T<sup>0</sup> merges and the verb raises to T<sup>0</sup> to get its aspect feature valued, along with the subject rasing to Spec, TP<sub>1</sub>: [TP<sub>2</sub> SBJ<sub>NOM</sub> [VP<sub>2</sub> < SBJ<sub>NOM</sub> > [VP<sub>2</sub> DP<sub>ACC</sub> [VP<sub>2</sub> NPI<sub>DAT</sub> [V' < DP<sub>ACC</sub> > (V<sup>0</sup><sub>2</sub> > ]] < V<sup>0</sup><sub>2</sub> > < v<sup>0</sup><sub>1</sub>] V<sup>0</sup><sub>2</sub>  $v^0$  T<sup>0</sup><sub>2</sub>

- (7)  $C^0$  merges:  $[_{CP2} \ [_{TP2} \ SBJ_{NOM} [_{vP2} \ < SBJ_{NOM} > [_{v'} \ DP_{ACC} \ [_{VP2} \ NPI_{DAT} ] V^0 < P_{ACC} > V^0 > ]] < V^0_2 > < v^0]] V^0_2 v^0 T^0] diye <math>C^0$ ]
- (8) Once the  $CP_2$  is complete, the first spell-out takes place, sending the NPI to spell-out before  $Neg^0$  even entered the derivation. SP:  $[_{VP2} NPI_{DAT} ]_{V} < DP_{ACC} > V^0_2 > ]]$

At the 8th step, the derivation crashes, since the NPI at the VP<sub>2</sub> is sent to spellout, becoming inaccessible to the Neg<sup>0</sup> that would enter the derivation several steps later.

#### 4. Conclusion

The main concern of this paper was to investigate how the way phases operate and the multiple spell-out NPI licensing in Turkish. To achieve that, we have discussed three pairs of examples; namely a pair which contains full finite CPs with the NPI occupying the subject position (see (24)), a pair of sentences with defective CPs in which the NPI occupies the subject position (see (25)) and lastly, a pair of sentences, one of which is a full finite CP and the other is a defective CP in which the NPI occupies the indirect object position (see (26)). The discussion was mainly focused on long-distance NPI licensing conditions since one of the most entertained explanations on NPI licensing, along with command, in previous studies was clausemateness. We have also seen that finiteness on its own does not have a direct impact on long-distance licensing of NPIs.

All in all, step by step analysis has shown us that the relationship between the negation and the NPI is related to phase boundaries. We have seen NPIs above the VP in defective clauses are accessible to the matrix negation, due to the fact that the defective CP cannot create a phasal domain, resulting in the NPI sharing a phasal domain with the negation. We have also seen that the embedded CP being defective does not guarantee the accessibility of the NPI to the negation, since NPIs occupying VP internal positions cannot be in the same phasal domain with the matrix negation. This showed us that finiteness does not directly affect the long-distance NPI licensing conditions but it has an indirect impact on it since it changes thephasal status of CP. Based on the discussion and the results, we conclude that NPIs in Turkish must be phasemates with the negation marker in order to be licensed.

Yamashita's (2003) work on NPIs in Japanese seems to align with the results and implications of our analysis in terms of phasemateness. Firstly, he argues that the clausemateness approach is also inadequate in accounting for NPIs

in Japanese.He presents the following examplethat was marked ungrammatical in (Uchibori 2000), statingthatthesentence is grammaticalbased on his nativespeakerjudgement. Therefore, he claimsthatthe NPI within the embedded clause must have been licensed by the negation in the matrix clause:

```
(27) ?? Bill-ga [ John-ga Mary-to-sikaau yoo(ni)]
Bill-NOM John-NOM Mary-with-NPI meet

no zoma-nakat-ta.
C<sup>0</sup> hope-NEG-TNS

'Bill hoped John meet only Mary.'
```

(Yamashita 2003: 4)

Moreover, (28b) shows that an NPI that is otherwise ungrammatical (28a) can be licensed if scrambled to the pre-subject position. He assumes that the landing site for scrambling out of an indicative CP cannot be the vP or VP in the matrix clause, therefore it must target the spec, CP of the embedded clause which results in NEG<sup>0</sup> and NPI ending up in different clauses. Yamashita (2003) considers this to be another example of the inadequeteness of the clausemateness approach and an evidence of phasemateness:

```
(28a) *Bill-ga Pam-ni [ John-ga Mary-to-sika
Bill-NOM Pam-DAT John-NOM Mary-with-NPI

atta to] tutae-nakat-ta.
met C<sup>0</sup> tell-NEG-TNS

'Bill told Pam John met only Mary.'

(Yamashita 2003: 3)
```

```
(28b) ? Bill-ga Pam-ni [Mary-to-sikai John-gati
Bill-NOM Pam-DAT Mary-with-NPI John-NOMT

atta to] tutae-nakat-ta
met C<sup>0</sup> tell-NEG-TNS

'Bill told Pam only Mary John met t<sub>i</sub>.'

(Yamashita 2003: 5)
```

Based on the analysis and discussion in Section 3, as well as the crosslinguistic data presented by Yamashita (2003), we can conclude that NPI licensing de-

pends on phasemateness as NPIs must share a common spell-out domain in order to be accessible to their licensor, which is the negation marker in our case.

# 5. Theoretical implications

The discussion as to NPIs above has also a theoretical implication regarding the phasal status of DP. There is an ongoing discussion about the phasehood of DPs in the literature. Studies such as Svenious (2004) and Hiraiwa (2005) suggest that DPs are phases, while it is a controversial claim according to Matushansky (2007). Phases are simply computational units of derivation sent to spell out as independent units (Chomsky 2008). To test such independence at interfaces of the derivation, certain diagnostics are proposed with regard to both phonological and semantic interfaces (Chomsky 2000; Legate 1998). Svenious (2004) follows the previous observations that show parallelism between clausal and nominal structures. He suggests that the phase heads in DP might be  $Q^0$  (uantifier) and  $n^0$ , or Op<sup>0</sup> and Num<sup>0</sup> (ber), triggering the spell out of NP. Hiraiwa's (2005) argument is also based on the observations that DPs and CPs display similarities in terms of case and agreement. He further proposes that CPs and DPs are two variants of the same syntactic structure whose categorical differences depend on whether  $C^0$  bears a +N(ominal) or -N feature, thus considering DPs to be phases in the same manner CPs are. Matushansky (2007) starts off with the point that DPs can bear computational complexity. Therefore, they might display behavior of independently spelled out units to ease the computational process of the derivation. She conducts phasal diagnostic tests such as isolation, <sup>10</sup> movement and movement like operations (clefting, predicate fronting, extraposition etc.) as well as testing semantic requirements such as bearing propositional value and having edge positions that can be targeted by reconstruction or successive cyclic movement. The PF tests she conducted indicate that DPs are phases, whereas the possible phasehood of DPs fails at LF tests. As a result of this, she points out

<sup>&</sup>lt;sup>10</sup> Isolation is the operation of seperating a lexical subarray from the rest of the derivation to see if it still remains grammatical alone. This phasal diagnostic is based on the assumption that convergent derivations form a phase and the derivation starts with choosing a lexical subarray. Thus, it is argued that if lexical arrays smaller than a phase are allowed, the notion of phases would not hold as much ground as it claims. Therefore, if (the lexical subarray of) a phrase can be separated from the rest of the sentence, that lexical subarray must belong to a phase as claimed by Legate (1998). Matushansky (2007) follows Legate's (1998) *Mad Magazine* sentences to exemplify isolation:

<sup>(</sup>a) (Can you teach lexical semantics?) – Me teach lexical semantics?

<sup>(</sup>b) (Hillary was elected president) – President? (Matushansky 2007: 160)

that the phasehood of DPs is rather controversial matter since the PF and LF diagnostics produce contradictory results. Our discussion with regard to NPIs in embedded clauses provides us with an implication about the phasehood of DPs, as exemplified below:

```
(29a) [CP1[vP1 Demet [VP1[DP Ali-nin kimse—yi Demet Ali-GEN anybody-ACC gör-me-diğ-i]-ni san-1yor-ø]]]. see-NEG-VNOM-POSS]-ACC suppose-PROG-3SG. 'Demet supposes that Ali didn't see anyone.'
```

(29b) [CP1[VP1 Demet [VP1[DP Ali-**nin kimse**-yi Demet Ali-**GEN anybody**-ACC gör-düğ-**ü**]-nü san-**mı**-yor-ø]]]. see-VNOM-**POSS**]-ACC suppose-**NEG**-PROG-3SG.

Literal: 'Demet doesn't suppose that Ali saw anyone.'
Intended: 'Demet doesn't suppose that Ali saw someone.'

The pair above includes embedded clauses with nominal nature, hence the genitive case on the subject and the possessive agreement on the verb. Based on the conclusion of this study, NPIs in embedded clauses are unable to be accessed and licensed by a negation marker in the matrix clause unless they share the same phasal domain with the negation. Then, the grammaticality of (29b) indicates that the DP in question does not create a spell-out domain, namely an opaque domain, due to the fact that the NPI in the direct object position is licensed by the negation marker of the matrix verb. This implies that DPs in Turkish may not display characteristics of a phase.

Future studies can shed light on the phasal diagnostics of DPs and licensing conditions of NPIs can also be reanalyzed after the phasal diagnostics of DPs are elaborated.

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