Negative Polarity Items, DPs and Phase Sliding
Olumsuz Kutup Birimleri, BelÖ ve Evre Kaydırımı

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Abstract

A negative polarity item (henceforth, NPI) needs a licensor and it may be an overt negation, question force, or a conditional clause (Benmamoun, 1997; Kelepir, 2001; Kumar, 2006; Kural, 1997; Laka, 2013; Mahajan, 1990; Vasishth, 1999). Studies on NPI literature abound and various studies have suggested various licensing conditions of NPIs. However, literature on the licensing conditions of NPIs can be grouped under two major titles. One of them is clausemateness (Choe, 1988; Kelepir, 2001; Muraki, 1978), which basically requires that NPIs and negation be in the same clausal domain. On the other side of the coin stands a more recent account, i.e. phasemateness (Kayabaşı & Özgen 2018; Yamashita, 2003), which states that NPIs must be spelt out within the same domain in which negation exists. Given the two accounts, only phasemateness can predict the behaviors of NPIs in full finite CPs, whereas none of those accounts can predict the grammaticality of nominal DP domains in Turkish with a negative licensor outside of the spell-out domain of the same DP. I attempted to discuss this problem at length, and show that the structural hierarchy within Turkish DPs is somewhat tricky. I will follow Gallego (2010) and Chomsky (2001) and assume that there is phase sliding within DPs, thus NPIs are also licensed within the same domain on the grounds of *weak phase impenetrability condition* 'PIC' (a.k.a. PIC₂). The system I will propose here is also borne out by other independent factors such as binding and embedding in Turkish.
Keywords: NPI, DP, Phase Sliding, PIC, Full Finite CP, Spell-out.

Öz

Olumsuz kutup birimleri (buradan sonra, OKB) kendisini yetkilendiren bir dilsel anlatım gerektirir. Bu dilsel anlatım, olumsuzluk, soru kipi ya da bir koşul tümcesi olabilir (Benmamoun, 1997; Kelepir, 2001; Kumar, 2006; Kural, 1997; Laka, 2013; Mahajan, 1990; Vasishth, 1999). OKB alanyazınındaki çalışmaların sayısı çok olmakla birlikte, çeşitli çalışmalar OKB'lerin yetkilendirilmesiyle ilgili farklı koşullar sunmuştur. Bununla beraber, OKB'lerin yetkilendirilmelerini açıklayan alanyazın iki temel başlık altında toplanabilir. Bunlardan birisi, temelde OKB ve olumsuzluğun aynı tümcesel alanda olmasını koşullayan tümcedeşlik koşuludur (Choe, 1988; Kelepir, 2001; Muraki, 1978). Diğeri ise, daha güncel bir yaklaşım olan evredeşliktir ve OKB ile olumsuzluğun aynı alan içerisinde dağıtıma yollanmasını öngörür (Kayabaşı & Özgen 2018; Yamashita, 2003). Bu iki yaklaşımı ele alırsak, yalnızca evredeşliğin tam çekimli TÖ'lerde yer alan OKB'lerin davranışlarını ve dağılımlarını açıklayabildiği görülür. Buna karşın, bu iki yaklaşımdan hiçbiri dağıtım alanı dışındaki bir olumsuzluk biriminin BelÖ dağıtım alanı içinde yer alan bir OKB'yi nasıl yetkilendirdiğini açıklayamaz. Biz öncelikle bu sorunu etraflıca tartışıp Türkçe BelÖ'lerin içyapısının

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göründüğünden daha karmaşık olduğunu gösterdik. Sonrasında, Gallego (2010) ve Chomsky'i (2001) izleyerek BelÖ'de evre kaydırımı gerçekleştiğini ve OKB'lerin bu sayede *güçsüz evre girimsizliği koşulu* 'EGK' (yani, EGK₂) çerçevesinde çerçevesinde yetkilendirildiğini savladık. Burada önerdiğimiz sistem, bağlama ve içe yerleştirme gibi Türkçedeki bağımsız başkaca dilbilgisel verileri de açıklayabilmektedir.

Anahtar Sözcükler: OKB, BelÖ, Evre Kaydırımı, EGK, Tam Çekimli TÖ, Dağıtım.

Introduction

Polarity items appear in environments associated with a particular grammatical affirmative or negative context. Polarity items which appear in negative contexts, adversative constructions, conditionals or interrogatives are called negative polarity items (Benmamoun, 1997; Giannakidou 2011; Kelepir, 2001; Kumar, 2006; Kural, 1997; Ladusaw 1979; Laka, 2013; Mahajan, 1990; Vasishth, 1999 among others). From a typological perspective, NPIs are reported to exist in many languages of the world (*see* Haspelmath, 1997). Turkish is one of those languages, and NPIs in this languages can appear in negative declaratives as well as in positive affirmatives (Göksel & Kerslake, 2005):

(1) *Turkish*

a. Ali   kimse-yi   gör-me-di.[1]
   Ali   anyone-ACC   see-NEG-PST
   'Ali did not see anyone.'

b. Ali   kimse-yi   gör-dü mü?
   Ali   anyone-ACC   see-PST   Q
   'Did Ali see anyone?'

c. *Ali   kimse-yi   gör-dü.
   Ali   anyone-ACC   see-PSt
   'Ali saw anyone'

The NPI in (1) is *kimse* (anyone) and (1a) is a negative statement in which the NPI is licensed in contrast to (1c). Similarly, the NPI in (1b) is also licensed since the statement is an interrogative. Based on their morphological properties, Kelepir (2001) categorizes NPIs in Turkish into 3 subgroups: (i) the adverb *hiç* (ever), (ii) words beginning with *hiç* such as *hiçkimse* (anybody) or *hiçbir X* (any X), and (iii) other words excluding *hiç* such as *asla* (never), *katiyyen* (in any way) etc. The point here is that Turkish lacks a counterpart of English *nobody*; therefore, using one of the NPIs among these three groups necessitates a negative/adversative/interrogative environment. Recent literature on NPIs focuses on the distributional and licensing conditions of those items. Many of those works can be grouped under two alternative approaches. Below, I will discuss these two approaches to NPI licensing –i.e. clausemateness vs phasemateness.

Literature on NPI Licensing: Clausemateness vs. Phasemateness

A number studies proposed different accounts as to the licensing conditions of NPIs. Among such studies stand *clausemateness* (Choe, 1988; Kelepir, 2001; Muraki, 1978) and *phasemateness* (Kayabaşı & Özgen 2018; Yamashita, 2003). Consider the following data:

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[1] I employed Leipzig Glossing Rules to provide the grammatical functions of the data. See the following link for further information: https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf

(2) *Turkish*

   a. Ali kimse-yi   gör-me-di.
      Ali anyone-acc   see-neg-pst
      'Ali did not see anyone.'

   b. Ben [CP Ali kimse-yi   gör-me-di   diye] düşün-üyor-um
      I   Ali anyone-ACC   see-NEG-PST   COMP think-PROG-1SG

   c. *Ben [CP Ali kimse-yi   gör-dü   diye] düşün-mü-yor-um.
      I   Ali anyone-ACC   see-PST   COMP think-NEG-PROG-1SG
      '(int.) I think Ali did not see anyone.'

(2a) is a repeated example of (1a). In (2a), there is an NPI *kimse-yi* (anyone-acc) licensed by a c-commanding negation marker on the verb (*see* Kural, 1997). This is a case of clausemateness proposed by Choe (1988), Kelepir (2001), and Muraki (1978) among others since the NPI and the negation are within the same clausal domain. Further, it also holds in (2b). NPI *kimse-yi* (anyone-acc) in the embedded clause is licensed by a clausemate c-commanding negation marker on the verb. (1c), on the other hand, is also predicted by the clausemateness account in that the NPI *kimse-yi* (anyone-acc) and the negation marker on the verb are in different clausal domains. Negation marker is on the matrix verb whereas the NPI is trapped within the embedded clause.

A possible question that comes to the mind is whether the overt complementizer *diye* (that) is related to the difference in grammaticality regarding the baseline sentences given in (2). The matrix verb in (2b-c) requires an overt complementizer. However, there is another verb in Turkish *san-* which does not take an overt complementizer. Without an overt complementizer, the sentence is still ungrammatical. Contrast (3a) with (3b):

(3) a. Ben [CP Ali kimse-yi   gör-me-di]   san-ı-yor-um.
      I   Ali anyone-ACC   see-NEG-PST   suppose-NEG-PROG-PST-1SG
   b. *Ben [CP Ali kimse-yi   gör-dü]   san-mı-yor-du-m.
      I   Ali anyone-ACC   see-PST   suppose-NEG-PROG-PST-1SG
      '(int.) I think Ali did not see anyone.'

The asymmetry between (3a) and (3b) suggests that the overt complementizer is neutral in determining the grammaticality for such clauses.

Although the negation marker in (2a-3a) and (2b-3b) c-commands the preceding NPI *kimse-yi* (anyone-acc) in both clauses, one can say that the c-command condition is not a sufficient condition but a necessary condition for the NPI to be licensed. This is borne out by the Japanese data in (4) below in that the embedded NPI cannot be licensed by the overt negation on the verb:

(4) *Japanese*

  *Bill-ga Pam-ni   [CP John-ga   Mary-to-sika   atta   to]   tutae-*nakat*-ta
    Bill-NOM Pam-DAT   John-NOM   Mary-with-NPI   met   COMP tell-NEG-TNS
    'Bill *(Neg)* told Pam [John met [*(NPI)* only Mary]].'

                                                     (Yamashita, 2003, p. 3)

Yamashita (2003, p. 6) also argues that the validity of the clausemateness must be called into question on empirical grounds, once we consider an example, where the otherwise unlicensed NPI in (4) can be licensed if it is scrambled to the clause initial position of the embedded clause:

(5) ?Bill-ga   Pam-ni   [CP Mary-to-sika$_i$ John-ga t_i atta to]   tutae-*nakat*-ta.
    Bill-NOM   Pam-DAT   Mary-with-NPI   John-NOM   met COMP   tell-*NEG*-TNS
    'Bill $_{(Neg)}$ told Pam [[$_{(NPI)}$ only Mary]$_i$ John met t_i].'

Yamashita (2003) follows Saito (1985) and assumes that scrambling out of the indicative CP cannot target the matrix *v*P/VP and that the highest possible position for the scrambled NPI in (3) is Spec, CP. Therefore, the validity of clausemateness condition can be called into question since the NPI in (3) is still in the same clause with its licensor NEG on the matrix verb. Kayabaşı & Özgen (2018, p. 85) provides another data from Turkish given in (6) below. The data also supports Yamashita's counter-examples to clausemateness. NPI in the subject position of the embedded clause can be licensed by a matrix negation, if it is the subject of an ECM clause:

(6) Demet [CP kimse-yi   kitab-ı   oku-du diye]   bil-*mi*-yor
    Demet   anyone-ACC   book-ACC   read-PST COMP   know-NEG-PROG
    'Demet doesn't think that anyone read the book.'

Here, the authors follow Şener (2008) and assume that the accusative marked ECM clause subject *kimse-yi* (anybody-ACC) is moved to Spec, CP to check its discourse features, namely [TOPIC]. The position of the NPI does violate clausemateness condition (if any) since the licensor and the NPI are not within the same domain. Yet, the sentence in (6) is still grammatical.

Japanese data provided in (4) and (5) by Yamashita (2003), and the Turkish data in (1) and (6) show that the licensor 'negation' and the licensee 'NPI' relation cannot be defined under the clausemateness principle along the lines of Kelepir (2001) and Murakami (1978), and that the definition must be reconsidered. Kayabaşı & Özgen (2018) reformulates this relation as *phasemateness*:

(7) *Phasemateness*
    NPIs must share a common spell-out domain in order to be accessible to their licensor.

They assume PIC$_2$ (Chomsky, 2001) and argue 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. Bearing this in mind, the following example in (8) is rendered as ungrammatical in Turkish since the NPI and its licensor are not within the same phasal domain, i.e. phasemates (Kayabaşı & Özgen 2018, p. 104):

(8) *[CP1[*v*P1 Demet [CP2[*v*P2 sen [VP2 kitab-ı   kimse-ye   ver-di-n]] diye]   bil-mi-yor]]].
    Demet   you book-ACC   anyone-DAT   give-PST-2SG COMP   know-NEG-PROG
    'Demet doesn't know that you gave the book to anybody.'

At the *v*P2 level of the derivation, the NPI *kimse-ye* (anybody-DAT) is embedded within the spell-out domain VP2, and by the time the comp *diye* is merged at CP2 level, VP2 has already been spelt-out. This leaves the embedded NPI unlicensed since the licensor NEG on the matrix verb cannot impenetrate the previously spelt-out domain –i.e VP2.

The Problem: A First Pass

It is very plausible to assume on the grounds of PIC$_2$ that the NPI-licensing is an operation which is constrained by the cycles called phases (Chomsky, 2001), since such licensing operations are also constrained by phases (*see* Lee-Schoenfeld (2004) for binding and licesing of anaphors). What is intriguing here is that the phasemateness condition suggested by these authors (Kayabaşı & Özgen, 2018; Yamashita, 2003) has another outcome for phases. Svenious (2004) and Hiraiwa (2005) suggest that DPs are phases, whereas Matushansky (2007) casts doubts on the phasehood properties of DPs. Svenious (2004) argues that

there is a parallelism between clausal and nominal constructions, and that the phase heads in DP might be Q(uantifier) and *n*, or Op and Num, triggering the spell out of NP. Hiraiwa (2005) suggests that DPs and CPs display similarities in that these two phrases are two variants of the same syntactic structure whose categorical differences depend on whether C bears a +N(ominal) or −N feature, thus considering DPs to be phases in the same manner CPs are[2]. If we assume that DPs are also phases, the same phasal mechanism presented in (6) should also work in the same way as it does in CPs. However, as elaborated in the following sections, the behavior of NPIs within DPs are different from those within CPs.

Aim and Organization

Following this problem, I aim to explore the distributions of NPIs within DPs, and to propose a system that accounts for the licensing of NPIs within DPs by the matrix negation. To this end, I will first discuss some background issues such as subordination in Turkish and the nominalization patterns. Then I will move on to show that Turkish is a truly DP language as opposed to what Bošković (2008, 2012, 2013) asserts – i.e. Traditional Noun Phrase language (TNP language). Then, I will elaborate the problem in detail, and introduce the phase sliding system (Gallego, 2010). Last, I will attempt to show that the structure within DPs of Turkish allows phase sliding for morphological reasons, and the raising of phasal head within DPs extends the spell-out domain, which in turn allows the NPI within DP to be licensed by the matrix negation. The discussion section concludes the study with some further issues raised by the proposal presented here.

The Problem: A Second Pass

A first pass of the problem leads us to the conclusion that DPs behave differently from CPs in licensing the NPIs. This will contradict the arguments of Kayabaşı & Özgen (2018) and Yamashita (2003) who state that NPIs are licensed within the same phasal domain. Before seeing whether phasemateness also works in DPs in Turkish, let us first present a crash course on Turkish subordination since Turkish is a language that uses nominalization heavily as a subordination strategy (Göksel ve Kerslake, 2005; Kornfilt, 1997).

A Crash Course on Subordination in Turkish

Non-finite complement clauses (as well as many other adjunct clauses) bear genitive-possessive agreement in the language[3]:

(9) Ali [İrem-in   uyu-duğ-un]-u   düşün-dü.
    Ali İrem-GEN   sleep-VNOM-3POSS-ACC   think-PST
    'Ali thought İrem (has) slept/was sleeping.'

The data (9) shows that the person feature of the genitive marked embedded subject (İrem) is encoded on the nominalized embedded verb by 3POSS. Changing the subject also changes the person marking on the nominalized verb:

(10) … [siz-in   uyu-duğ-unuz]-u …
     2PL-GEN   sleep-VNOM-2PL.POSS-ACC
     '… you (have) slept/were sleeping.'

The data presented in (9) and (10) has a full finite counterpart, which can be considered as a CP:

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[2] This idea actually goes back to Abney (1987).
[3] See Kornfilt (1997) for an extensive inventory of subordination in Turkish.

(11) a. Ali [CP İrem uyu-du   diye]   düşün-dü.
        Ali   İrem sleep-PST   COMP   think-PST
        'Ali thought that İrem slept'

    b. Ali [CP siz   uyu-du-nuz   diye]   düşün-dü.
        Ali   2PL   sleep-PST-2PL COMP   think-PST
        'Ali thought that you slept.'

Since embedded clauses in (9) and (10) bear genitive-possessive nominal agreement (as in simple nominal phrases of Turkish such as Ali-nin[GEN] araba-sı[3POSS]), those embedded clauses are nominal phrases (*see* Bošković, & Şener, 2014; Keskin, 2009; Ulutaş 2009).

Assuming non-finite complement clauses as nominal phrases, the question emerges as to which label they bear. I am going to take a quick look at whether nominal phrases are DPs or TNPs in the sense of Bošković (2008), and conclude that Turkish nominal phrases are DPs. This is an important issue to contemplate on since the two phrases differ from each other in their inner structures.

Turkish: TNP or DP?

Bošković (2008, 2012, 2013) offered an influential proposal which defends the idea that languages typologically differ from each other in categorizing their nominal phrases. There are languages with traditional noun phrases (TNP) such as Serbo-Crotian while some other languages such as English have DPs. Bošković & Şener (2014) claim that Turkish is one of the TNP languages by applying the general typological properties of TNP languages onto Turkish. I am going to show that some of these properties are fallacious, and claim that DP hypothesis is a universal component of the Universal Grammar (*see* Citko, 2010; Erk-Emeksiz, 2003; Pereltsvaig, 2007; Progovac, 1998; Rappaport, 2001; Rutkowski, 2002 and Rutkowski & Progovac, 2005). I will specifically focus on this distinction since the spell-out domains of the two phrases (i.e. TNP vs DP) will differ from each other, which in turn will be the determining factor of the phasemateness condition presented in (6).

Bošković (2008, 2012) argues that languages without definite articles are TNP languages based on a number of crosslinguistic generalizations where the existence of articles in a given language plays an important role. However, as Kornfilt (2018) also puts it, there are also other determiners such as demonstratives in Turkish (*bu* 'this', *şu* 'that') and they can also suffice to qualify as D category in a head-final language like Turkish. Besides, Dryer (2013) following Underhill (1976), Lewis (1967) argues that from a typological perspective Turkish is an indefinite article language since the numerical word *bir* 'a' can be counted as an indefinite article. In the typological distribution map provided in Dryer (2013) 40 languages are indicated as having no form of definite article but indefinite article. Eser-Erguvanlı (1984, p. 15) also claims that the numerical word *bir* is an indefinite article in her discussion of indefinite noun phrases and their positions in simplex clauses. Thus, Kornfilt (2018) seems right in asking what if when one language has one type of article but not another as in the case of Dryer's (2013) map which marks 40 languages with no definite but indefinite articles. Bošković's (2008, 2012) argumentation, then, is fallacious in the sense that it leads us to false conceptual conclusions.

Bošković & Şener (2014) argues that scrambling languages such as Chukchi, Chichewa, Hindi, Korean etc. all lack overt articles; therefore, Turkish also fits in this typological classification since it is a scrambling languages. There is one obvious problem with this generalization[4]. As is well known, there are many other scrambling languages with overt articles such as Spanish (Ordóñez, 1998; Lopez, 2012), Italian (Rizzi, 1997; Samek-Lodovici, 2019) and Greek (Alexiadou, 1999; Alexiadou & Anagnostopoulou, 1997) among other languages. Assuming scrambling a determining factor for the TNP vs DP distinction is also fallacious since it is a weak argument.

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[4] See Gilligan (1987) for a detailed analysis of connections between pro-drop, scrambling and lack of articles.

Another diagnostic proposed by Bošković (2008, 2012) is left branch extraction (LBE). Bošković & Şener (2014, p. 106) notes that only article-less languages may allow AP leftbranch extraction (LBE). Thus, such extraction is allowed in Russian, Polish, Czech, Ukrainian, Slovenian, Latin, Mohawk, Southern Tiwa, Gunwinjguan languages, Hindi, Bangla, Angika, and Magahi, all article-less languages):

(12) *Rusça*

Doroguju$_i$	on	videl	[t_i	mašinu]
Expensive$_i$	he	saw	[t_i	cars]

'*Expensive, he saw cars.'

Given the one way correlation between LBE and article-less-ness, having LBE shows that there is no article in Russian, thus a NP-language. However, as Bošković & Şener (2014, p. 106) also admits, LBE does not work in Turkish. That is, Turkish does not allow LBE:

(13) a. Ali [ucuz kitap-lar] oku-r.
       Ali   cheap book-PL   read-PRES
   b. *Ucuz$_i$ Ali [t_i kitap-lar] oku-r.
        cheap Ali   book-PL   read-PRES
       'Ali reads cheap books.'

(13) is ungrammatical; thus, LBE is not allowed in Turkish. There are many other tests applicable to languages without articles, but some of them are not testable in Turkish since Turkish has no equal or corresponding grammatical construction such as multiple wh-fronting and head-internal relatives among others. I will not go into detail of every tests proposed by Bošković (2008, 2012), but I conclude this section as follows. Literature on the discussion of this distinction casts doubt on the typological distinction between TNPs and DPs. Many tests proposed by Bošković (2008, 2012) are either non-applicable in Turkish or fail in many aspects[5]. So, I follow Kornfilt (2018) and claim that Bošković's (2008, 2012) tests face empirical problems in Turkish. I also assume that Turkish is better analyzed as a DP language.

DPs and NPIs

Once we are settled with the distinction between TNP and DP for Turkish, we now can discuss the phasemateness within the framework of DPs. As remembered, phasemateness condition requires that NPIs share a common spell-out domain in order to be accessible to their licensor. If the phasal domain is CP, then examples in (6) and (8) seem to agree with phasemateness. However, if we assume that DPs are phases and that Turkish is a DP language, then phasemateness fail to account for the licensing of the NPI embedded within the spell-out domain of embedded clause. Contrast (14a) with (14b):

(14) a. *Ali [$_{CP}$ [$_{SOD}$[6] Ayşe   kimse-yi   gör-dü] diye]   düşün-mü-yor.
       Ali   Ayşe   anyone-ACC   see-PST   COMP   think-NEG-PROG

   b. Ali [$_{DP}$ Ayşe-nin [$_{SOD}$ kimse-yi   gör-düğ-ün]]-ü   düşün-mü-yor.
       Ali   Ayşe-GEN   anyone-ACC   see-VNOM-3POSS-ACC   think-NEG-PROG
       'Ali does not think that Ayşe saw anyone.'

(14b) is a sentential DP in which the subject is marked with genitive and the verb bears a possessive ending. Sentential DPs are DPs which has a full finite CP counterpart. In this case, (14b) is a sentential DP with a counterpart in (14a). Given that these two sentences are minimal pairs, there is a strict asymmetry

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[5] There is also another study on another Turkic language by Turker (2019). Turker (2019) applies these tests on Uzbek and concludes that the results are far from persuasive for Uzbek to be a TNP language.
[6] SOD stands for spell-out domain.

between the grammaticality of the two due to the unlicensed NPI in (14a). To ensure that the ungrammaticality stems from the unlicensed NPI in (14a), let us consider another sentence in which the NPI has been replaced by a referential expression of any kind:

(15) Ali [CP [SOD   Ayşe   kaza-yı   gör-dü]   diye] düşün-mü-yor.
     Ali   Ayşe   accident-ACC   see-PST   COMP   think-NEG-PROG
     'Ali does not think that Ayşe saw the accident.'

    Substituting the NPI in (14a) *kimse* (anyone) with a referential expression *kaza* (accident) improved the sentence to a perfection in terms of grammaticality. This ensures that the asymmetry between (12a) and (12b) is a matter of NPI licensing. The unlicensed NPI in (12a) is expected on the grounds of phasemateness since the NPI has already been spelt out before the Neg is merged into the system:

(16) a. Spell-out of CP phasal domain   : [[CP [SOD Ayşe kimse-yi   gör-dü]   diye_{Comp}]]
     b. Merge matrix V and Neg   : [[CP [SOD …]   diye] düşün-_v   Neg]

    After the spell-out of the phasal domain of CP[7], the domain becomes inaccessible due to PIC reasons. In (14b) Neg is merged after the spell-out of NPI. The shaded areas in both examples clearly shows that NPI and negation cannot see each other throughout the derivation. However, phasemateness cannot predict the grammaticality of (14b) since the spell-out domain has also been sent to interfaces by the time the matrix negation is merged into the system similar to (14a):

(17) a. Spell-out of DP phasal domain   : [[DP [SOD Ayşe-nin   kimse-yi   gör-düğ-ün] D]]
     b. Merge matrix V and Neg   : [[DP [SOD …]   D] düşün-_v   Neg]

    The fact that the sentence is grammatical casts serious doubts on the explanatory power of phasemateness, since it cannot account for the grammaticality of (14b) if and only if DP is a phase along the lines of Svenious (2004) and Hiraiwa (2005).

    In addition to sentential DPs, there is also complex DPs in which there is a predicative noun and arguments of the same predicative noun. Similar to sentential DPs, complex DPs also bear genitive-possessive agreement:

(18) a. [DP mahkum-lar-ın   hapishane-den firar-ı]
         convict-PL-GEN   prison-ABL   escape-3POSS
     'the escape of prisoners from the jail'
     b. [DP komşu-lar-ın   hasta-yı   ziyaret-i]
         neighbor-PL-GEN   patient-ACC   visit-3POSS
     'The neighbor's visit to the patient'

    In (18a) the predicative noun is *firar* (escape) marked with 3rd singular possessive and there is an agentive noun *mahkum* (convict) marked with genitive case and a theme noun *hapishane* (prison) marked with ablative case marker. Similarly, in (18b), the predicative noun is *ziyaret* (visit) marked with 3rd singular possessive and there is an agentive noun *komşu* (neighbor) marked with a plural and genitive case, and a theme noun *hasta* (patient) marked with accusative case marker.

    Similar to sentential DPs, complex DPs also allows NPI to be licensed with a matrix negation. Consider the following example:

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[7] The label of the CP phasal domain is not our concern here, since it does not change the problem. I prefer to keep it as SOD. The same story goes with DP phasal domain as well.

(19) [DP Ali-nin   kimse-ye   yalan-ın]-ı   yakala-ya-ma-dı-k.
       Ali-GEN   anyone-DAT   lie-3POSS-ACC   catch-ABIL-NEG-PST-1PL
     'We haven't been able to catch Ali's lie to anyone.'

Phasemateness cannot predict the grammaticality of (19), since the NPI is trapped within the spell-out domain of DP. By the time the matrix negation is merged into the system, the phasal domain within DP has already been shipped to interfaces:

(20) a. Spell-out of DP phasal domain   : [[DP [SOD Ali-nin   kimse-ye   yalan-ın] D]]
     b. Merge matrix V and Neg   : [[DP [SOD …] D] yakala-v   Neg]

Likewise, simple DPs in which there is an existential relation between the possessor and possessee also display the same distribution. First, consider the following simple DP:

(21) [DP Ali-nin   cüzdan-ı]
       Ali-GEN   wallet-3POSS
     'Ali's wallet'

There is an existential relation between the possessor *Ali* and the possessee *cüzdan* (wallet), which can roughly be paraphrased as 'Ali has a wallet'. The possessor *Ali* is marked with genitive case, and the possessee *cüzdan* (wallet) is marked with third person possessive. If such DPs are also phases, then one expects that the NPI within the spell-out domain of DP would not be licensed. However, the situation is on the contrary to expectations:

(22) [Ali-nin   hiçbir şey-i]   çal-ın-ma-dı.
       Ali-GEN   anything-3POSS   steal-PASS-NEG-PST
     'Nothing belonging to Ali was stolen'

The phasal computation I have shown in (16) – (17) and (20) is the same here. Let us see how phasemateness fails to account for such DPs as well:

(23) a. Spell-out of DP phasal domain   : [[DP [SOD Ali-nin   hiçbir şey-i] D]]
     b. Merge matrix V and Neg   : [[DP [SOD …] D] çalın-v   Neg]

Again, the NPI is seen within the spell-out domain of DP. The matrix negation and the NPI within DP *hiçbir şey* (anything) are not phasemates. Still, the sentence is grammatical. The question emerges here as to why the NPIs in the examples between (12) and (21) remain unlicensed but render the sentence grammatical. I will elaborate the topic with two additional assumptions integrated into phasemateness, and show that the situation is far from being inexplicable, and that the phasemateness also accounts for the data discussed above with two additional assumptions –i.e. phase sliding (Gallego 2010), and PIC$_2$ (Chomsky, 2001). First, I will make sure that Turkish DPs are phases.

DPs Are Phases in Turkish, Aren't They?

Since phases are syntactic units defined by interface properties –i.e. <PHON, SEM> (Chomsky, 2001), one can use these interface properties to decide whether a given phrase is a phase or not. Literature is divided into two groups with respect to the definition of phases. On one side, it is the case that all maximal projections are phases (*see* Epstein & Seely 2002, 2006, Lahne 2008, Müller 2004, 2011). On the other side, a more natural alternative is that only a certain well-defined subset of syntactic categories constitutes the set of phases (Citko, 2010, p. 59). Holding onto the latter definition, the diagnostics of what a phase is tend to be classified into three major groups. One interface property is related to semantic interpretation of such syntactic units, so let us call them LF-diagnostics. The other interface property is related to the phonological interpretation of those units, which we can call PF-diagnostics. Phasal units do also behave as independent syntactic chunks, thus there are also syntactic diagnostics.

A number of questions can be asked to define these interface properties, since the answers of such questions will lead us to the conclusion as to whether a given phrase is a phase or not[8]. Let us use the trimmed version of the questions summarized by Citko (2010), since some questions are the subset of the others:

(i)   Is DP a domain for feature valuation?
(ii)   Is D a source of uninterpretable features?
(iii)   Does movement out of DP proceed through the edge of DP?
(iv)   Can an element moving out of DP be interpreted at the edge of DP?
(v)   Does D trigger Spell-Out?
(vi)   Can the complement of D be elided?

First two questions are syntactic properties of phases, and the rest are related to interfaces. Note that some of the diagnostics, which are not stated here are inapplicable to Turkish for independent reasons. Below, I will discuss the applicable diagnostics.

The questions given in (i) and (ii) are questions of agreement domains –i.e. domains in which uninterpretable features are hosted. Chomsky (2001, 2004) asserts that phase heads are the loci of uninterpretable features and phasal domains are domains of feature valuation. I follow Svenious (2004) and assume that the parallelism between CPs and DPs are obvious and the case feature on D resembles to that of C in that both features are uninterpretable. This uninterpretable feature on D also makes it a probe, which searches its domain for a feature to value. The prime example of a feature, which is valued by D is genitive case in Turkish DPs. Since genitive case is a structural case, one can easily say that the unvalued feature on the subject of, say, sentential DPs is valued by D. Contrast (24a) with (24b):

(24) a. *pro* [CP Ali-Ø   uyu-yor   diye]   bil-iyor-um.
                   Ali-NOM   sleep-PROG   COMP   know-PROG-1SG
        'I know that Ali is sleeping.'

    b. *pro* [DP Ali-nin uyu-duğ-un]-u   bil-iyor-um.
                   Ali-gen   sleep-vnom-3poss-acc   know-PROG-1SG
        'I know that Ali is sleeping (*lit.* [DP Ali's sleeping])'

The bracketed clause in (24a) is the full finite CP form of the bracketed clause in (24b). The subject case in both bracketed clauses is striking in the sense that in sentential DP it is marked with genitive. Let us

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[8] I refer the reader to Citko (2010) for an extensive survey and discussion of these properties with respect to major and minor phasal phrases in the literature.

call this case marker 'adnominal genitive[9]' since it is attached to a nominal. Adnominal genitives in Turkish are not limited to the subjects of sentential DPs as given in (25a-e):

(25) a. öğrenci-nin   araba-sı   POSSESSOR
         student-GEN   car-3POSS
         'The student's car'

     b. professor-ün makale-si   AGENT
         professor-GEN   article-3POSS
         '(*lit.*) An article (written) by a professor'

     c. [iki   yataklı oda]-nın   fiyat-ı   ATTRIBUTE
         two   bedded   room-GEN   cost-3POSS
         'The cost of the two bedded room'

     d. yaralı-lar-ın   tedavi-si   THEME
         wounded-PL-GEN   treatment-3POSS
         'The treatment of the wounded'

     e. kurabiye-nin kırıntı-lar-ı   PARTITIVE
         cookie-GEN   crumble-PL-3POSS
         'The crumble of the cookie'

As seen in (25a-e), the genitive case is not determined by semantic factors. Irrespective of its semantic content, the possessor(-like) arguments are marked with genitive, which indicates that the genitive case is a truly structural case marked within a nominal domain.

Another illustration of valuation of case comes from complex DPs in Turkish (*see* (19)). Complex DPs include a verbal noun, which bears its own arguments. Some of those arguments, particularly the direct objects, are marked with accusative case, which is another structural case. Keskin (2009) follows Pesetsky & Torrego (2001) and argues that in complex DPs, the object's accusative case is valued by D, on the contrary to the general belief that it is licensed by the verbal noun (*cf.* Sezer, 1991):

(26) a. Siz   Rohan-ı   *beklenmeyen / ansızın   istila   et-ti-niz.
         2PL   Rohan-ACC   unexpected   / suddenly   invasion do-PST-2PL
         'You *unexpected/suddenly invaded Rohan.'

     b. siz-in   Rohan-ı   beklenmeyen / ansızın   istila-nız
         2PL-GEN   Rohan-ACC   unexpected   / suddenly   invasion-2PL
         'your unexpected/sudden invasion of Rohan'

Keskin (2009, p. 249) asserts that if the verbal nominal *istila* (invasion) were a part of the incorporated structure of [v [N *istila*] Ø] as proposed in Sezer (1991), we would then expect that only verbal modifier could modify it as seen in (24a). However, in (26b) the verbal noun *istila* (invasion) can also be modified by a nominal modifier. It shows that the verbal noun is truly a noun, which is not a case assigner in traditional terms. Thus, the accusative on the object in (26b) *Rohan-ı* (Rohan-ACC) must have been valued by something else other than the verbal noun, which is D in such constructions. Pesetsky & Torrego (2001) dubs such constructions as multiple-agree system. The genitive and the direct object's accusative case is valued by D in a multiple-agree fashion.
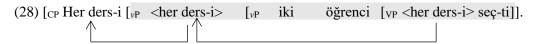
I have shown that the answers of the first two questions given in (i) – (ii) is 'yes' for Turkish DPs. Given that the DPs in Turkish is a feature valuation domain, let us attempt to answer the next two questions. The answers of the next two questions will show us whether DPs have edge property or not. I will employ quantifiers with reconstruction to see whether such DPs allow interpretation at the edge. Consider the following data:

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[9] See Citko (2010, p. 111) for a short discussion on adnominal genitive in Polish.

(27) a. Her ders-i   iki   öğrenci seç-ti.
        every course-ACC   two   student pick-PST
        '(*lit*.) Two students chose every course'
     b. Distributive $\forall x.2\exists y\ (C(x) \rightarrow ((S(y) \wedge P(y, x)))$
     c. Collective $2\exists y.\forall x\ (S(y) \rightarrow ((C(x) \wedge P(y, x)))$

There are two possible interpretations for this sentence. The idiomatic translation of (27b) 'distributive reading' is as follows: for every *x*, there are two *y*s for which *x* is a course such that *y* is a student and *y* picked *x*. (27b) is the case in which for every course, there are two students such that two (different) students picked every course. In (27c), however, the situation is reverse. There is a collective reading in which there are two *y*s for every *x* for which *y* is a student such that *x* is a course and *y* picked *x*. (27c) states that there are two specific students for every course such that these students picked every course. Each native speaker of Turkish I consulted confirmed the possible interpretations and thus, it indicates that there must be a kind of movement for the universal quantifier to have scope over existential quantifier or vice versa.

The basic reasoning behind this is as follows. Phases have edges, which allow extraction out of their spell-out domains. Once a syntactic item is moved from a phasal domain, it has to land on the phasal edge as an intermediate step due to PIC reasons. After it has been moved to its final position, it leaves behind a copy, which affects semantic interpretation. This is what we have observed in (27a) & (28):

(28) [_{CP} Her ders-i [_{vP} <her ders-i>   [_{vP}   iki   öğrenci [_{VP} <her ders-i> seç-ti]].

Given that the shaded domain is the phasal domain, the phrase bearing the universal quantifier is first moved to Spec, *v*P, which is regarded almost as an uncontroversial phase in the literature (*see* Legate, 2003). After it has been moved to Spec, CP, the phasal domain is spelt-out to <SEM> with a symmetrical c-command statement, in which the higher universal quantifier c-commands the existential, and the existential c-commands the lower universal. This analysis predicts both interpretations given in (27b) and (27c). To say, the edge property of *v*P leads to two different interpreatations, which is the preliminary answer of the questions (iii) and (iv).

 Below, we will see that the phasal domain of DP also behave accordingly. A sentential DP also bears an edge property since it allows an ambiguous reading in cases where the embedded quantifier is moved to Spec, matrix CP following Miyagawa (2010) among others:

(29) [_{CP} Her ders-i [_{vP} Ali [_{DP} <her ders-i> iki öğrenci-nin <her ders-i> seç-tiğ-in]-i   duy-muş]].
        every course-ACC Ali   two student-GEN   pick-VNOM-3POSS-ACC hear-EVID
     'Ali heard that every course has been picked by two students.'

The sentence in (29) also has two interpretations. In distributive reading, each student picked two different courses, and Ali heard of it. In the collective reading, two specific students picked each course, and Ali heard of it. The availability of both interpretations indicates that DP also has the edge property and the universal quantifier lands on this position before it is moved to sentence initial position. Having an edge property is another crucial diagnostic for a phase.

Having an edge property is not a property for only sentential DPs. This is also borne out by the agreeing DPs:

(30) a. [_{CP} Her reng-i [_{vP} müşteri tarafından [_{DP} <her reng-i> iki gömleğ-in <her reng-i>] satın al-ın-dı]].
        every color-ACC customer by   two shirt-GEN   buy-PASS-PST
     b. 'Every color of the two shirts is such that the customer bought them.'   *distributive*
     c. 'The customer bought every color of the two (specific) shirts.'   *Collective*

The agreeing DP has an edge through which the universal quantifier moves. The copy it leaves behind on the edge allows two different interpretations. The sentential DPs as well as agreeing DPs shows us that they have edge properties, thus, they are phases.

Now, let us return to the answers of the question given in (v) and (vi). These questions are related to the second syntactic property of phases. Besides having an edge feature, which affects semantic interpretation, phases also bear spell-out feature, which affects phonological interpretation. Spell-out wipes away a domain to interfaces, thus the first diagnostic to spot whether a given domain is a phase or not is the operation *ellipsis*. Ellipsis is an operation where a certain amount of syntactic structure is removed from a given structure. Most analyses regarding elliptical structures explain the phenomenon as a PHON deletion operation (*see* Lasnik, 1999 & 2001; Merchant, 2001 for sluicing; *see* Ross, 1970; Abe & Hoshi, 1997 for gapping, and *see* Wexler & Culicover, 1980; Levine, 1985; Kayne, 1994; İnce, 2009 for right node raising and *see* Gallego, 2009; Gengel, 2007; Yoshida & Gallego, 2008 for phase theoretical accounts). Rouveret (2012) follows Gallego (2009) and Lasnik (2008) and claims that spell-out domains are to be elided due to PIC reasons. Therefore, we can employ ellipsis as a diagnostic to find out the spell-out domains; thus, phases. Let us employ this test to three different DPs in Turkish adapted from Özgen (2018, p. 13):

(31) a. Ellipsis in agreeing DPs
[DP Ali-nin [NP cüzdan-ı]] bul-un-du, ama [DP Ayşe-nin-(ki) [NP cüzdan-ı]] hala kayıp.
  Ali-GEN wallet-3POSS find-PASS-PST but Ayşe-GEN-PRON still lost
'Ali's book has been found but Ayşe's is still lost.'
b. Ellipsis in complex DPs
[DP ilk doktor-un [NP hasta-yı muayene-si]] uzun-du,
  first doctor-GEN patient-ACC examination-3POSS long-PST
ama [DP ikinci doktor-un-(ki) [NP hasta-yı muayenesi]] kısa.
but second doctor-GEN-PRON short
'The first doctor's examination of the patient was long, but the second one was short.'
c. Ellipsis in sentential DPs
[DP Ali-nin [CP kereviz ye-diğ-i]] yalan ama [DP Ayşe-nin-(ki) [CP kereviz ye-diğ-i]] gerçek.
  Ali-GEN celery eat-VNOM-3POSS lie but Ayşe-GEN-PRON real
'It is a lie that Ali ate celery, but it is real for Ayşe.'

Each example given from different DP types yield grammaticality, and the elided domains are spell-out domains of DPs. I have put the pronominal –*ki* suffix in parantheses, since some speakers also mark it grammatical without it. In both ways, it does not affect my analyses here since instead of deleting the spell-out domain, it substitutes a suffix. In a nutshell, examples given in (31a-c) indicates that the answer of the questions given in (v) and (vi) is also 'yes'.

I can here easily conclude by the given tests that the DPs in Turkish display phasal characteristics. I have hereby eliminated other possible analyses following the assumption that DPs in Turkish are not phases. Now, I move on to present my proposal. First, I will shortly discuss how phase sliding account works (Gallego, 2010), and then I will analyze the problem with the proposal I have suggested here. We will observe that the system I have proposed here accounts for the problematic data given between (14) – (23), and that phasemateness account is on the right track if and only if we are to assume that there is phase sliding in Turkish.
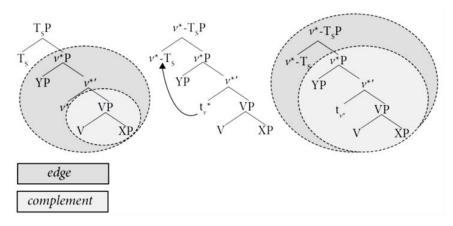
How to Solve the Problem?

In previous sections, I have asked why the NPIs in the examples between (14) – (23) remain unlicensed but render the sentence grammatical. This is a question that should certainly be addressed since DPs are also phases as I have shown in the previous heading. Let us answer the question here. I will first elaborate how phase sliding in the sense of Gallego (2010) works.

Phases Slide Upwards

Gallego (2010, p. 107) claims that a type of head movement, $v*$-T-(C) movement, is a type of feature driven movement. Therefore, whenever such movement occurs, he assumes that the label of the complex is hybrid. For instance, if $v*$ raises to adjoin to T, then one can expect to see amalgam of $v*$-T, which bears the fusion of the grammatical features each head carries. According to Gallego, if the amalgam of $v*$-T occurs within narrow syntax, $v*$ can be the center of the resulting structure. Therefore, if any head movement of $v*$-T takes place, it pushes the phase upstairs. This operation is a kind of an upstairs inheritance. Gallego (Gallego 2010, p. 108) refers to this operation as *Phase Sliding*, a more devised version of a previous account *Phase Extension* by Den Dikken (2007):

(32) *Phase Sliding*

In (30), we see a $v*$-T complex which behaves as a phase head. Gallego (2010) also claims that in a language including this type of movement such as Turkish the phase head is a complex of $v*$-T, whereas in languages where no such movement occurs the phase head is $v*$ itself. The basic idea I will employ in the analysis here is based on the notion that the phasal domain pushes further up if the relevant phase head moves to adjoin another head.

Phasemateness, NPIs within DPs and Phase Sliding

Now that we have introduced the system, it is time to explore and see what is wrong with the phasemateness. Remember that the phasemateness requires the NPI and the licensor to co-occur within the same spell-out domain. In the following data given in (14b) and repeated here in (33), we see a violation of phasemateness:
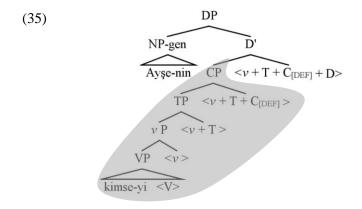
(33) Ali [$_{DP}$ Ayşe-nin [$_{SOD}$ kimse-yi gör-düğ-ün]]-ü düşün-mü-yor.
    Ali   Ayşe-GEN   anyone-ACC   see-VNOM-3POSS-ACC   think-NEG-PROG
    'Ali does not think that Ayşe saw anyone.'

The DP clause in (33) is a sentential DP and the NPI *kimse-yi* (anyone-ACC) is located within the boundaries of DP whereas the licensor negation is on the matrix verb. This case violates the principles of phasemateness in that the licensor and the NPI are in different domains. However, the surface representation might be misleading. Even though they are in different spell-out domains, the timing of the spell-out domains determine the licensor-NPI relation. In order to see this complicated relation, let me first elaborate the inner structure of sentential DPs, since the structural hierarchy within such phrases is key factor to integrate phase sliding into phasemateness.

Following Ulutaş (2008/2009), I assume that sentential DPs, which bear genitive-possessive agreement along with a verb carrying a verbal nominalizer, are projected as in (34):

(34) $[_{DP} [_{NPgen} \ldots] \; [_{D'} [_{CP} [_{TP} [_{vP} [_{NP} \ldots] \; v \;] \; T] \; C_{[DEF]}] \; D_{u[\varphi:\,]}]$

Note that the shaded areas are spelled-out domains following a phase sliding operation, and that NPgen stands for a genitive marked NP for the sake of clarity. DP in (34) includes a CP with defective features[10]; thus, it is selected by a functional nominal head, namely D. D bears uninterpretable φ-features, and it can transfer these features to T since C is defective. If we assume this construction, we can make the claim that the CP within sentential DPs in our analysis does not constitute a phase since its head is defective. Therefore, in the case of (33), the verb raises until D, which extends the phasal domain –i.e. phase-sliding:
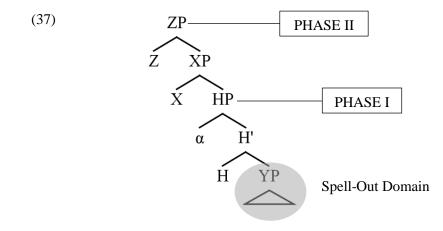
(35)

The shaded domain refers to the first spell-out domain after phase sliding. Note that the first spell-out domain within the shaded domain is the sister of v (i.e. VP) including the NPI *kimse-yi* (anyone-ACC). However, when the matrix verb raises to adjoin to v-T-C and thence D, the phasal domain is extended upwards until D, so the spell-out of the first domain (VP) is delayed. Still, the matrix negation is out of reach. Thus, phasemateness would have ruled out this sentence. Here, I will integrate another critical assumption into the system – PIC$_2$ a.k.a. weak PIC (Chomsky, 2001, pp. 13-14) (*cf.* Chomsky, 2000):

(36) *Phase Impenetrability Condition (Weak Version) a.k.a. PIC$_2$*
    The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.
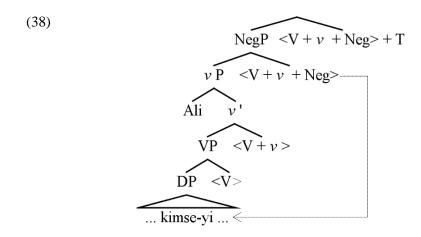
This definition of PIC allows probing inside the spell-out domain until the next phase head is merged. Assume another non-phase head X^0 merged with the phase HP. This head, as a non-phase head, can agree with YP since YP is not spelled out until another phase head (say Z^0) is merged:

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[10] I adopted this construction from Ulutaş 2008/2009. He claims that the defective C is there since it cannot transfer features to T, nor can it probe down to anything. In fact, having defective C is just an assumption for me and it does not change my analysis, since one of the levels (which is useless) will be missing. I refer the readers to Ulutaş (2008/2009) for further arguments on defective C.

(37)

ZP —————— PHASE II

Z   XP

X   HP ————— PHASE I

α   H'
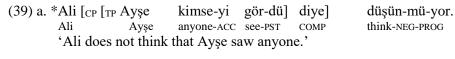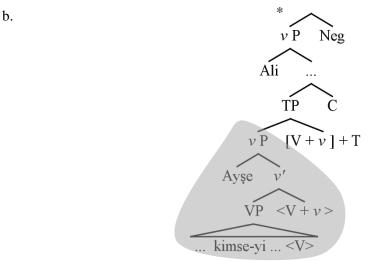
H   YP   Spell-Out Domain

The definition of PIC given in (2) is the weak version of PIC as opposed to the strong version (*see* Chomsky, 2000). Under this definition of PIC, X in (37) can agree with YP since YP is not spelled out until Z, another phase head, is merged.

Now, the system is ready to account for the grammaticality of (33). Phasemateness requires that the NPI and the licensor negation be within the same domain. However, due to its morphologically strong features, the verb moves until D, so the phasal domain is slided upwards. Then, PIC_2 comes into play and awaits the spell-out for the next phase head to be merged into the system as in (38):

(38)

NegP $<V + v + Neg> + T$

vP $<V + v + Neg>$

Ali v'

VP $<V + v>$

DP $<V>$

... kimse-yi ...

PIC_2 states that the spell-out of a 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. As a result, until the next phase head is merged and raised to phase-slide, the contents of this DP remain open to probes. Thus, as seen in (38), the NPI is licensed by the copy of the Neg, since the next phasal domain is slided onto T. The system I proposed here is based on phasemateness and phase sliding along with the PIC_2, and it works perfectly and accounts for the grammaticality of (33). Further, it has to account for the ungrammaticality of (14a) –i.e. the sentence containing a full finite CP domain. Let me re-note the data below:

(39) a. *Ali [CP [TP Ayşe   kimse-yi   gör-dü] diye]   düşün-mü-yor.
           Ali   Ayşe   anyone-ACC see-PST   COMP   think-NEG-PROG
         'Ali does not think that Ayşe saw anyone.'

b.

The system I have proposed here also accounts for the ungrammaticality of (39a). The CP domain in the clause given above does not allow licensing of the NPI *kimse-yi* (anyone-ACC) with the matrix negation (Neg) due to two reasons. First, V raises to *v* and [V+*v*] complex raises to adjoin to T, which triggers a phase sliding within the embedded full finite CP. The spell-out domain becomes *v*P and Neg cannot license NPI *kimse-yi* (anyone-ACC), since they are not in the same phasal domain. Second, due to PIC$_2$ reasons, the shaded spell-out domain is shipped to interfaces since the other phase head, say C, is merged and there is no further phase sliding since there is no other head-raising to C. Thus, phase sliding account within the framework of phasemateness works so far.

The examples between (33) and (39) show that NPIs are open to matrix negation for the sentential DPs. The proposed system also works fine with the agreeing and complex DP types. Consider the previous example repeated here in (40):

(40) *Complex DP*
    [DP Ali-nin   kimse-ye   yalan-ın]-ı   yakala-ya-ma-dı-k.
       Ali-GEN   anyone-DAT   lie-3POSS-ACC   catch-ABIL-NEG-PST-1PL
    'We haven't been able to catch Ali's lie to anyone.'

Before moving on to analyze the DP domain within the framework of phase sliding, I will first detail the hierarchical structure of the complex DPs.
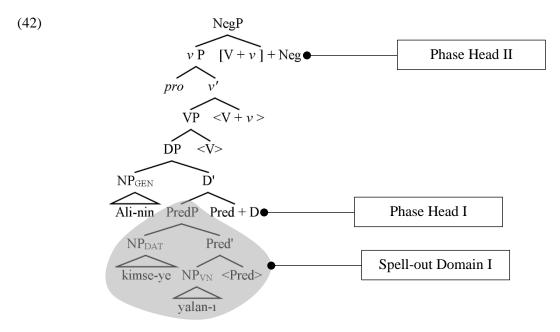
Keskin (2009) observes that such complex DPs bear genitive and possessive agreement along with a verbal argument. If the argument is marked with accusative case, Keskin states that it is the (phasal head) D, which marks the genitive and accusative cases within the framework of Pesetsky & Torrego's (2001) multiple agree. The hierarchy therein is as follows, and I also assume this internal structure:

(41) *Complex DPs*
    [DP [NPgen …]   [D' [PredP [NP …] Pred] D$_{u[\varphi:\ ]}$]

Keskin follows Sezer (1991) and claims that cases such as accusative are structural; therefore, they are licensed by D head, which dominates a verbal noun construction projected as PredP.

With this internal structure in hand, I can now continue analyzing the licensing of the embedded NPI within DP. The operation is along the same lines with the sentential DPs in that the phase sliding extends the domain so that the matrix negation can see the embedded NPI *kimse-ye* (anyone-DAT):

(42)

According to PIC$_2$ (Chomsky 2001), the spell-out of a phase is triggered by the insertion of the next phase head, therefore the content of the spell-out domain still remains accessible until the next phase head is merged. As a result, until the next phase head (i.e. *v* in (42)) is merged and raised to phase-slide (i.e. phase head II), the contents of this DP remain open to probes. Thus, the NPI *kimse-ye* (anyone-DAT) is licensed since the matrix negation can still see the NPI before it has been shipped to interfaces.

Last, I will explore the agreeing DPs. So far, we have seen that the system accounts for sentential and complex DPs. First, let me introduce the internal structure of agreeing DPs in a simple way. Following the general trend in the literature of DPs (*see* Citko, 2010; Erk-Emeksiz, 2003; Pereltsvaig, 2007; Progovac, 1998; Rappaport, 2001; Rutkowski, 2002 and Rutkowski & Progovac, 2005 among others), I simply assume that the internal structure of agreeing DPs is as follows:

(43) *Agreeing DPs*[11]
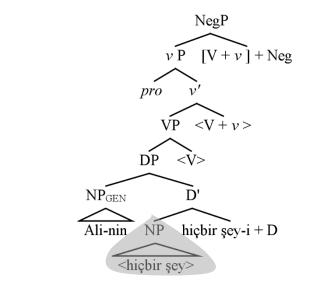   [$_{DP}$ [$_{NPgen}$ …] [$_{D'}$ [$_{NP}$ …] D$_{u[\varphi:\ ]}$]

Agreeing DPs are nominal phrases with a genitive marked NP as well as another NP, which is possessive marked. I assume that the possessive marked NP raises to D to license its possessive and for EPP reasons.

With this internal structure in hand, let me analyze the licensing of embedded NPIs within the framework of phase sliding. First, I will re-note the data I have previously provided in (22) below in (44):

(44) [$_{DP}$ Ali-nin   hiçbir şey-i]   çal-ın-ma-dı.
        Ali-GEN   anything-3POSS   steal-PASS-NEG-PST
   'Nothing belonging to Ali was stolen.'

---

[11] I skip the details of many intermediate projections such as NumP, QP, AdjP, DegP etc. since such projections does not influence my analysis here. Drawing the lines of the internal structure of DPs is beyond the scope of this study, so I refer the curious reader to the relevant literature cited therein.

Assuming that the 3POSS marked NPI *hiçbir şey-i* (anything-3POSS) is raised to adjoin to D for morphological reasons and that morphology is interwoven in syntax, it escapes the first spell-out domain, and becomes open to the matrix negation, as illustrated in (45):

(45)

The licensing of the embedded NPI is realized without even resorting to the phase sliding, since it already escapes the spell-out domain and can be seen by the matrix negation. However, PIC$_2$ makes this licensing operation possible because after the first phasal head, say *v*, is merged into the derivation, it is raised to phase-slide; thus, the system waits until this phase sliding operation comes to an end. When Neg is merged, the spell-out occurs after the NPI is licensed.

Independent Support: Binding and Embedding

I argued in this paper that the phasemateness account cannot solely account for the problematic data between (12) – (21). I claimed that the phasemateness account is right with two additional assumptions. First, I integrated the phase sliding system following Gallego (2010) into phasemateness. Second, I adopted PIC$_2$ and assumed that until the next phase head is merged, the spell-out domain is open to probes. The problematic data presented here are explained under the analysis of [phasemateness + phase sliding + PIC$_2$] account.

The analysis also has its implications as to two different independent domains. First, I will show that the proposal also explains binding domains. Since phase sliding extends the search domain for probes, an anaphor should also be bound by a matrix antecedent for DPs. Likewise, full finite CP domains should not allow anaphor binding as has been pointed out in Özgen (2019, p. 161-162):

(46) a. ?Ali$_i$ [$_{DP}$ benim kendi$_i$-nden   kork-tuğ-um]-u   san-ıyor
     Ali   my   self-ABL   be.afraid-VNOM-1POSS-ACC   suppose-PROG
   'Ali thinks that I am afraid of him.'
   b. *Ali$_i$ [$_{CP}$ [ben kendi$_i$-nden   kork-tu-m]   diye]   bil-iyor.
     Ali   I   self-ABL   be.afraid-PST-1SG   COMP   know-PROG
   'Ali knows that I was afraid of him.'

In (46a) according to PIC$_2$ (Chomsky, 2001), the spell-out of a 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. As a result, until the next phase head is merged and raised to phase-slide, the contents of this DP

remain open to probes. The CP domain in (46b), on the other hand, does not allow binding of the anaphor *kendi* with the matrix subject *Ali* due to two reasons. First, *v* raises to adjoin to T, which triggers a phase-sliding in the embedded CP. The spell-out domain becomes *v*P and co-indexation cannot occur between the embedded subject *Ali* and the anaphor *kendi*, since they are not in the same phasal domain. Second, due to PIC reasons, the shaded spell-out domain is shipped to interfaces since the other phase head, C, is merged and there is no further phase sliding since there is no other head-raising to C. In a nutshell, phase sliding makes correct predictions as to the binding transparency of DPs as well as the licensing of NPIs.

Binding of anaphors from DP domains provides us independent evidence in favor of the [phasemateness + phase sliding + PIC$_2$] account. As well as binding, I will show that embedding of NPIs within two separate DP domains yield ungrammaticality since phase sliding extends the domain until the point where the next phase head is merged:

(47) Polis-ler, [$_{CP}$ Ali [$_{DP}$ Ayşe-nin   kimse-yi   gör-düğ-ün]-ü   düşün-mü-yor diye] duy-muş.
      cop-PLU   Ali   Ayşe-GEN   anyone-ACC see-VNOM-3POSS-ACC   think-NEG-PROG COMP   hear-EVID
      'Cops heard that Ali does not think that Ayşe saw anyone'

The data in (47) is grammatical in accordance with our expectations, since the shaded domain is the spell-out domain after the phase sliding. The matrix negation encoded on the matrix verb can see the embedded NPI *kimse-yi* (anyone-ACC) before the shaded domain is shipped to interfaces on the grounds of PIC$_2$. However, if we displace the negation and mark it on the very matrix verb *duy-muş* (hear-EVID), the sentence will worsen. This is also expected since the NPI *kimse-yi* (anyone-ACC) and the negation will be far away from each other, and will not be phasemates even after the phase sliding:

(48) *Polis-ler, [$_{CP}$ Ali [$_{DP}$ Ayşe-nin kimse-yi   gör-düğ-ün]-ü   düşün-üyor diye] duy-ma-mış.
      cop-PLU   Ali   Ayşe-GEN anyone-ACC see-VNOM-3POSS-ACC   think-PROG   COMP hear-NEG-EVID
      '(*int*.) Cops heard that Ali does not think that Ayşe saw anyone'

The data in (48) is predicted by the analysis I put forward here. The [phasemateness + phase sliding + PIC$_2$] account extends the search domain within the shaded DP, yet there is no negation to license the embedded NPI. Since there is another phase head (diye 'COMP') before the licensor negation, the spell-out occurs, so the NPI *kimse-yi* (anyone-ACC) is shipped to interfaces without being licensed.

Concluding Remarks

In this paper, I claimed that the NPIs within DPs are licensed via an operation referred to as phase sliding. First, I assumed that DPs are also phases following Chomsky (2006), Hiraiwa (2005), Marantz (2007), Ott (2008) and Svenious (2004) among others. Then, I attempted to show that Turkish is a DP-language as opposed to Traditional Noun Phrase languages (Bošković, 2008). I also elaborated the problem after I proved that DPs in Turkish are phases within the framework of the diagnostics. Last, I discussed the problematic data on the grounds of [phasemateness + phase sliding + PIC$_2$] account. The account can successfully explain the underlying mechanism behind the licensing of NPIs within DP domains. Binding and embedding also support the analysis independently.

Since phase sliding is an operation that extends the search domain for probes and other syntactic operations, the interpretation of syntactic chunks (i.e. spell-out domains) will be affected after this operation. NPI licensing and binding are related to the conceptual content of lexical items, thus they are interpreted at <SEM>. If phase sliding is right, then we might expect that it will also influence <PHON> interpretations such as nuclear stress, subextraction etc. I leave this issue for future studies.

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