Bare singulars and singularity in Turkish

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Abstract. This paper explores the semantics of bare singulars in Turkish, which are unmarked for number in form, but sometimes behave like singular terms and sometimes like plural terms. There are two approaches one can take in addressing this challenge. One can take them to be fundamentally number neutral/plural terms or one can take them to be fundamentally singular terms. Regardless of which one is pursued, the challenge is to account for those cases where the base assumption does not work. Previous accounts (Bliss 2004, Bale et al. 2010, and Görgülü 2012) explore the first approach and propose that bare singulars of Turkish denote number neutral sets. Within this path, nouns that are morphologically marked as plural are treated as denoting sets of pluralities only. This approach leads to a symmetric correlation of morphological and semantic (un-)markedness. However, in this paper, I defend the second approach and show that Turkish actually patterns with English where this correlation is exhibited asymmetrically. Namely, I claim that bare singulars in Turkish denote atomic properties and that plural forms have a number neutral semantics as in English, though I discuss several respects in which they behave differently. The apparent number neutrality of bare singulars stems from singular kind reference, which following Dayal (2004), I take to be grammatically atomic but conceptually plural in nature, contrasting with plural kind terms. The cases where bare singulars are interpreted number neutrally are the non-case-marked argument position, the existential copular construction, and the predicate position. For the former two, I offer an analysis of pseudo-incorporation where bare singulars are singular kind terms introduced at the event kind domain as thematic arguments to yield sub-event kinds (cf. Dayal 2011, 2015 and Aguilar-Guevara and Zwarts 2010). For the latter, I argue that bare singulars can occur as singular kind terms in the predicate position participating in a special construction that I call *kind-naming specification*. Finally, I briefly discuss the consequences of my analysis for current debates on the semantics of numeral constructions.

1. Introduction

Turkish nouns, like English nouns, come in two forms. One is unmarked for number (Turkish *kitap*; English *book*) and one is morphologically marked plural (Turkish *kitap+lar*; English *book+s*). While unmarked nouns in English are readily identified as singular terms since they consistently give rise to singular interpretations, the picture is less clear for Turkish unmarked nouns, which sometimes behave like singular terms and sometimes like plural terms.

There are two approaches one can take in addressing this challenge. One can take them to be fundamentally number neutral/plural terms or one can take them to be fundamentally singular terms. No matter which approach is adopted, the challenge is to account for those cases where the base assumption does not work. On the view that unmarked nouns are essentially number neutral terms, one needs a principled account for instances when that neutrality is not in evidence; on the view that unmarked nouns are essentially singular terms, one needs a principled account for instances where the singularity is not in evidence.[1]

Bliss (2004), Bale et al. (2010), and Görgülü (2012) pursue the first approach and claim that Turkish nouns that are unmarked for number denote number neutral sets. This approach has

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[1]A third potential approach, namely that they are ambiguous between being singular and plural, may reduce to the first approach.

been very influential since it pairs morphologically unmarked forms with a semantically un-marked denotation. Accordingly, their take on Turkish plurals is that they are exclusive of atoms, denoting pluralities only, which also draws a parallel between morphologically marked forms and semantically marked denotations. However, it is the case that this match is not at-tested in languages like English where the semantic reflection of morphological (un-)markedness is realized in the opposite way. In other words, while unmarked nouns of English manifest themselves as singulars, marked forms, i.e. plurals, are number neutral, inclusive of both atoms and their pluralities (Krifka 2003, Sauerland et al. 2005, Spector 2007, and Zweig 2009).

This paper shows that Turkish actually patterns with English in that respect. The correlation between morphological and semantic (un-)markedness is exhibited in the opposite direction. Defending the second approach mentioned above, I claim that Turkish nouns that are unmarked for number denote atomic properties, and there are sound construction specific reasons for their perceived neutrality, all of which follow from their singular kind reference. Following Dayal (2004), I show that singular kind terms differ from plural kind terms in being grammatically (impure) atomic, though they remain true to the notion of kind, being conceptually plural. The cases where bare singulars are interpreted number neutrally are the non-case-marked argument position, the existential copular construction, and the predicate position. For the former two, I offer an analysis of pseudo-incorporation where bare singulars are singular kind terms in-troduced at the event kind domain as thematic arguments to yield sub-event kinds (cf. Dayal 2011, 2015 and Aguilar-Guevara and Zwarts 2010). For the latter, I argue that bare singulars can occur as singular kind terms in the predicate position participating in a special construction that I call *kind-naming specification*. In this construction, a kind entity that the referent of a singular or plural subject term is a member of is named by a singular kind term. In both cases, number neutrality is inferred due to the conceptual plurality of singular kinds.

During the course of the analysis, I show that Turkish plurals have an unmarked denotation inclusive of atoms and their pluralities, though I also discuss several respects in which they differ from English plurals. Additionally, my analysis has consequences for the current debates on the semantics of numeral constructions, in favor of Ionin and Matushansky's (2006) view of numerals, which are claimed to be functions combining with atomic properties.

Before we begin, a note on terminology is in order. The term *bare* refers to determinerless noun phrases following the convention in Carlson (1977) and neo-Carlsonian studies on English bare plurals. Thus, I refer to nouns that are unmarked for number as *bare singulars*, whereas I refer to nouns inflected with *-lAr* as *bare plurals*. So, as long as they are not accompanied by an overt determiner, nouns will be regarded as bare even if they have case-marking on them.

This paper is organized as follows: Section 2 shows that bare singulars denote atomic proper-ties accompanied by the analysis of bare plurals and singular kind terms. Section 3 provides the accounts for the number neutral interpretations of bare singulars. Section 4 discusses the consequences of the overall analysis for numeral semantics. Section 5 concludes.

2. Bare Singulars as Atomic Properties

The aim of this section is to show that Turkish bare singulars are semantically singular, de-noting sets of atoms whereas bare plurals are number neutral, denoting sets of atoms and their pluralities. In Section 2.1, I will first present an overview of bare singulars within the perspec-

tive of the previous accounts. Then, I will present evidence for my claim based on the semantics of bare plurals in Sections 2.2 and singular kind terms in Section 2.3.

2.1. Overview of Bare Singulars

Since the seminal work of Link (1983), the mereological treatment of pluralities has become a well-established tradition in the semantic literature, where the domain of individuals (D_e) has been assumed to include atoms and their closure under the sum operator $\oplus$. For example, the complete atomic join semilattice with a, b, and c as singular individuals include the atoms a, b, c, and the pluralities a $\oplus$ b, a $\oplus$ c, b $\oplus$ c, and a $\oplus$ b $\oplus$ c.

$$a{\oplus}b{\oplus}c$$

$$a{\oplus}b \qquad a{\oplus}c \qquad b{\oplus}c$$

$$a \qquad b \qquad c$$

Bliss (2004), Bale et al. (2010), and Görgülü (2012) argue that Turkish bare singulars denote number neutral sets, i.e. a complete atomic join semilattice. For example, if in a model a, b, and c are the books, the bare singular *kitap* 'book' denotes the set shown below. (In the rest of the paper, I will assume this model for ease of exposition.)

(1) $[\![kitap]\!] = \{a, b, c, a \oplus b, a \oplus c, b \oplus c, a \oplus b \oplus c\}$

This claim is based on the number neutral interpretation of bare singulars in the predicate position as in (2), where a bare singular is predicated of a plural subject (Bale et al. 2010).[2]

(2)   Ali ve   Merve **çocuk**.
        Ali and Merve child
        'Ali and Merve are children.'

Bare singulars in Turkish are also known to have number neutral interpretations in the non-case-marked direct object position (Bliss 2004 and Görgülü 2012) and the existential copular construction (Görgülü 2012), as shown in (3) and (4).

(3)   Ali **kitap** oku-du.
        Ali book read-PAST
        'Ali did book-reading.' (one or more books)

(4)   İçeride **fare**   var.
        inside   mouse exist
        'There is a mouse/are mice inside.'

On the other hand, they are interpreted as strictly singular and definite in case-marked argument

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[2]Thanks to a reviewer, the possibility of the bare singular *çocuk* 'child' in (2) to be analyzed as an adjective is ruled out by the fact that it cannot be modified by an adverb such as *çok* 'very' unless it means childish.

positions, i.e. case-marked subject, direct object, and indirect object positions, as shown in (5a), (5b), and (5c).[3]

(5) a. **Çocuk** ev-e   koş-tu.
         child   home-DAT run-PAST
         'The child ran home.'
         Not: 'The children ran home.'
     b. Ali **kitab-ı**   oku-du.
         Ali book-ACC read-PAST
         'Ali read the book.'
         Not: 'Ali read the books.'
     c. Ali **çocuğ-a** kitab-ı   ver-di.
         Ali child-DAT book-ACC give-PAST
         'Ali gave the book to the child.'
         Not: 'Ali gave the book to the children.'

The challenge for treating bare singulars as number neutral, then, is to account for these cases where they receive a singular interpretation. One possible solution would be to derive their singularity in case-marked argument positions via a competition based-approach. In line with this idea, Bliss (2004), Bale et al. (2010), and Görgülü (2012) claim that Turkish bare plurals are exclusive of atoms in denoting pluralities only. Namely, the bare plural *kitaplar* 'books' denotes the following set in their view.[4]

(6) $[\![kitap + PL]\!] = \{a \oplus b, b \oplus c, a \oplus c, a \oplus b \oplus c\}$

Maintaining this analysis, one might argue that the competition between number neutral bare singulars and strict plurals results in the singular reading of bare singulars as in (5). Namely, bare plurals are more informative or have a stronger presupposition than bare singulars based on scalar reasoning (Grice 1975, Spector 2007) or Maximize Presupposition (Heim 1991). If one utters the sentence with the less informative/weaker alternative, then s(he) believes that the more informative/stronger alternative is false or its presuppositions are not met, resulting in a singular reading for the former. The advantage of this analysis is the treatment of morphological (un-)markedness in a symmetric correlation with semantic (un-)markedness. Morphologically unmarked bare singulars denote number neutral sets, whereas morphologically marked bare plurals denote sets of pluralities only. The singularity of bare singulars is simply derived by a competition between semantically marked and unmarked denotations.

Despite what these cases seem to suggest, I argue that bare singulars in Turkish denote sets of atoms only. So, the denotation of the bare singular *kitap* 'book' is as shown in (7).

(7) $[\![kitap]\!] = \{a, b, c\}$

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[3]Turkish lacks an overt definite article and both bare singulars and plurals can occupy argument positions. The general consensus about subjects is that they receive a null nominative case marker. However, in Section 3.1.5, we will see that subjects can also be caseless under certain conditions, which are analyzed as pseudo-incorporation in Öztürk (2005). See also Johanson (1977), Kornfilt (1984, 1997, 2009), and von Heusinger and Kornfilt (2005).

[4]The evidence that Bale et al. (2010) use for their strict plural account of Turkish bare plurals is the fact that they can be predicated of plural subjects, but not singular subjects. The details of the behavior of bare nouns in the predicate position will be discussed in Section 3.3. See also fn 44.

In Section 2.2, I will show that the strict singular interpretation of bare singulars in case-marked argument positions is evidence for their atomic denotation. I will illustrate that the competition account given above is untenable and bare plurals in Turkish are actually inclusive of atoms and their pluralities, as represented in (8).

(8) $[\![kitap + PL]\!] = \{a, b, c, a \oplus b, a \oplus c, b \oplus c, a \oplus b \oplus c\}$

The three cases exemplified in (2), (3), and (4) above pose a challenge for this approach, but I will show that each has an analysis that delivers number neutrality through a distinct source, without compromising the atomicity of bare singulars.

What will be critical in making this case is the ability of bare singulars to refer to kinds. Turkish, like English, can refer to kinds through singular kind terms, as well as plural ones, as shown in (9a), but with some well-attested differences between the two forms. To exemplify one, while plural kinds are compatible with reciprocals, singular kinds are not, as shown in (9b).

(9) a. **Dinozor(-lar)** 66 milyon 38 bin   yıl önce yok   ol-du.
      dinosaur-PL   66 million 38 thousand year ago extinct be-PAST
      'Dinosaurs became extinct 66 million 38 thousand years ago.'
   b. **Kedi(*-ler)** birbiri-ne   saldır-ır.
      cat-PL   each.other-DAT attack-AOR
      'Cats attack each other.'

This disparity will be shown to follow from Dayal's (2004) view on differences between singular and plural kind terms in English and other languages. We will see that it establishes further evidence for the semantic singularity of bare singulars as well as number neutrality of bare plurals in Turkish. Section 2.3 is therefore dedicated to the discussion of kind terms and their relevance to the central claim of this paper that Turkish bare singulars are atomic in nature.

2.2. Strict Singularity of Bare Singulars in Case-marked Argument Positions

Krifka (2003), Sauerland et al. (2005), Spector (2007), and Zweig (2009) argue for a number neutral account of bare plurals in English. In these works, it has been observed that although bare plurals contain multiplicity as part of their denotation in positive contexts, they lose that requirement in downward entailing contexts and in questions. In other words, the 'more than one' meaning does not seem to be strictly part of their interpretation. The perceived multiplicity arises as a result of a conversational implicature in positive contexts.

This observation also holds for Turkish bare plurals as evidenced by the example in (10). If we had gone to the forest and come across one bear, it would be bizarre to respond to the question in (10) with 'no'. Because seeing one bear is an appropriate answer to the question in (10), the denotation of the bare plural *ayılar* cannot be 'more than one' bear.[5]

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[5] A reviewer helpfully draws attention to the fact that the plural small *pro* is also number neutral. For example, the sentence *Bu apartmanda merdivenleri hiç temizlemiyorlar anlaşılan.* 'In this apartment, it appears that they don't clean the staircases at all.' can be responded to with a singular subject as in *Evet, kapıcı gerçekten son derece ihmalkar.* 'Yes, the janitor is really terribly neglectful.'

(10)   Orman-da **ayı-lar-la**   karşılaş-tı-nız   mı?
         forest-LOC bear-PL-COM come.across-PAST-2PL QUEST
         'Did you come across bears in the forest?
         a.   Evet, bir tane gör-dü-k.
               yes, one CL   see-PAST-1PL
               'Yes, we saw one.
         b.   #Hayır, bir tane gör-dü-k.
               no,   one CL   see-PAST-1PL
               'No, we saw one.'

Now, let us examine the occurrence of a bare plural in a negative context. In (11a), the multi-
plicity implicature surfaces since the 'more than one' interpretation is stronger than the 'one or
more' interpretation.

(11)   a.   **Çocuk-lar** sokak-ta   top oynu-yor.
               child-PL   street-LOC ball play-PROG
               'Children are playing ball on the street.'
         b.   **Çocuk-lar** sokak-ta   top oyna-**mı**-yor.
               child-PL   street-LOC ball play-NEG-PROG
               'Children aren't playing ball on the street.'

More precisely, consider a scenario where only one child is playing ball on the street. The core
meaning and the scalar meaning of (11a) are as given below.

(12)   a.   S = One or more children are playing ball on the street.
         b.   S+scalar = More than one child is playing ball on the street.

In this scenario, S is true but S+scalar is false. A sentence S1 is stronger/more informative than
a sentence S2 iff S1 is true in fewer scenarios than S2. Therefore S+scalar is stronger than S,
and the scalar implicature surfaces. Eventually, the plural is interpreted exclusively.

On the other hand, the core meaning and the scalar meaning of (11b) are as given below.

(13)   a.   S = One or more children are not playing ball on the street.
                 (No children are playing.)
         b.   S+scalar = More than one child is not playing ball on the street.

Again considering a scenario where only one child is playing ball on the street, S is false and
S+scalar is true, therefore S is stronger than S+scalar. As a result, the scalar implicature does
not surface, and the plural is interpreted inclusively. If bare plurals of Turkish were strictly
plural with a multiplicity condition, (11b) would be predicted to be felicitous in this scenario.

Above I have shown how the multiplicity reading of bare plurals arises under the scalar im-
plicature account (Spector 2007, Zweig 2009). However, it could also be explained based on
Maximize Presupposition, which favors the one with the stronger presupposition, i.e. the more
informative one, when two morphological forms compete, on the condition that no presup-
position violation occurs (Heim 1991, Sauerland et al. 2005). In that case, the multiplicity
implicature in (11a) would surface due to the stronger presupposition of the 'more than one'

meaning and disappear in (11b) due to its weaker status.

The 'one or more' reading of bare plurals is also available in other downward entailing contexts such as the antecedents of the conditionals, as in (14a) and the restrictors of universal quantifiers, as in (14b), where the bare plural *erkekler* 'men' is interpreted number neutrally.

(14) a. Eğer **erkek-ler** tarafından aldat-ıl-dı-y-sa-n,   sen de biz-e
           if   man-PL   by   cheat-PASS-PAST-COP-COND-2SG you also we-DAT
           katıl-abil-ir-sin.
           join-ABIL-AOR-2SG
           'If you have been cheated by men, you can join us.' (one or more men)
      b. **Erkek-ler** tarafından aldat-ıl-an   herkes   biz-e   katıl-abil-ir.
           man-PL   by   cheat-PASS-REL everybody we-DAT join-ABIL-AOR.
           'Everyone who has been cheated by men can join us.' (one or more men)

Therefore, in line with the argumentation for English bare plurals, I argue that Turkish bare plurals are also number neutral and the multiplicity condition in positive contexts arises as a result of a conversational implicature (see Renans et al. 2017, 2018 for experimental evidence).

Given that Turkish bare plurals are number neutral, the strict singularity of bare singulars in case-marked argument positions cannot arise from a competition with a stronger expression. So, we can conclude that the correlation between morphological and semantic (un-)markedness is exhibited asymmetrically as is the case for English. In the next section, I provide further evidence for the singularity of Turkish bare singulars based on their singular kind reference.

2.3. Bare Singulars as Singular Kind Terms

In this section, I first discuss the properties of kinds by introducing Turkish plural kind terms and then return to singular kind terms. We will see that the differences between the two forms of kind reference constitute further evidence for the atomicity of bare singulars. This section provides the backdrop for Section 3 where singular kind reference is shown to be the source of the apparent number neutrality of bare singulars in specific constructions.

2.3.1. Overview of kind terms

In the previous section, we have seen that Turkish bare plurals are like English bare plurals in being number neutral. They are also equivalent in having the following primary readings: kind (15a), generic (15b), and existential (15c) (see Carlson 1977, Krifka et al. 1995, and Chierchia 1998 for English bare plurals):

(15) a. **Dinozor-lar** 66 milyon 38 bin   yıl önce yok   ol-du.
           dinosaur-PL 66 million 38 thousand year ago   extinct be-PAST
           'Dinosaurs became extinct 66 million 38 thousand years ago.'
      b. **Ayı-lar** genelde saldırgan   ol-ur.
           bear-PL usually aggressive be-AOR
           'Bears are generally aggressive.'

c. **Kedi-ler** dışarıda çiftleş-iyor.
cat-PL   outside mate-PROG
'Cats are mating outside.'
'The cats are mating outside.'

I suggest, following Chierchia (1998) that bare plurals start as type $\langle s, \langle e, t \rangle \rangle$ and become kind terms of type $\langle s, e \rangle$ via nominalization operation (*nom*), which is shown in (16a). *Nom* is a function from properties to functions from situations s to the maximal entity satisfying that property in that situation. In other words, a plural kind, let us say the dinosaur kind, is an individual correlate of the property of being a dinosaur, as shown in (16b). This implies that bare plurals are kind terms that are built on the corresponding property and they can directly combine with kind-level predicates, as in (16c).[6]

(16)   a. $\cap : \lambda P_{\langle s, et \rangle} \, \lambda s \, \iota x \, [P_s(x)]$
       b. $\cap dinosaur = \lambda s \, \iota x \, [dinosaur_s(x)]$
       c. $[\![(15a)]\!] = become\text{-}extinct \, (\lambda s \, \iota x \, [dinosaur_s(x)])$

When they combine with object-level predicates, further operations come into the picture (Chierchia 1998). One of these operations is the inverse of *nom*, predicativization (*pred*), which takes the extension of the kind and returns the set of singular and plural entities that are the instantiations of the kind, as shown in (17). This is in line with the number neutrality of bare plurals and is made possible by the fact that plural kinds are transparent with respect to the properties that they are constructed from. So, in return, these properties, namely number neutral sets of instantiations, may be retrieved from the corresponding kinds. In generic contexts, the Generic operator quantifies over these instantiations, as in (18).

(17)   a. $\cup: \lambda k_{\langle s, e \rangle} \, \lambda x \, [x \leq k_s]$
       b. $\cup\cap dinosaur = \lambda x \, [x \leq \iota x \, [dinosaur_s(x)]$

(18) $[\![(15b)]\!] = Gen \, s, x \, [\cup\cap bear(s)(x)] \, [aggressive(s)(x)]$

The other relevant operation is *Derived Kind Predication (DKP)*, which provides sort adjustment and introduces existential quantification over the instantiations of the kind provided by *pred* in a given situation, as shown in (19). This occurs when a kind-level argument combines with an object-level predicate in an episodic context.

(19)   a.   DKP: If P applies to objects and k denotes a kind, then $P(k) = \exists x \, [\cup k(x) \wedge P(x)]$
       b. $[\![(15c)]\!] = mate \, (\cap cat) = DKP \Rightarrow \exists x \, [\cup\cap cat(x) \wedge mate(x)]$

Application of DKP also results in the obligatory narrow scope interpretation of bare plurals, as has been discussed for English:

(20)   a.   **Köpek-ler** bugün havla-mı-yor.
           dog-PL   today bark-NEG-PROG
           'Dogs aren't barking today.'

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[6]These facts hold for all nouns, not only the ones denoting biological kinds. As pointed out in Krifka et al. (1995), Chierchia (1998), and Dayal (2004), among others, any type of nouns can be kind terms to the extent that a sufficiently regular behavior can be identified with respect to their denotation.

b. $[\![K\ddot{o}pekler\ havlam\iota yor]\!] = \neg bark\ (^{\cap}dog) = DKP \Rightarrow \neg\ \exists x\ [^{\cup\cap}dog(x) \wedge bark(x)]$

The fact that plural kinds are transparent to their instantiations is supported by the tests showing that access to the atomic level is necessary in object-level readings (Schwarzschild 1996). Below, compatibility with *reciprocals* and the predicate *come from different regions* are applied as such tests.[7] The compatibility of bare plurals with them shows that plural kinds have a see-through relation with their instantiations, since the atomic level of a kind is accessible only if its instantiations are grammatically available. (21a) and (21b) exemplify generic and episodic contexts, respectively. In both cases, the plural kind terms undergo type-shifting via *pred* and denote a set of singular and plural entities that instantiate the kind in the relevant situation. The reciprocal and the predicate *come from different regions* distribute over these instantiations.

(21) a. **Kedi-ler** birbiri-ne   saldır-ır.
          cat-PL   each.other-DAT attack-AOR
          'Cats attack each other.'
      b. **Ayı-lar** bu hayvanat bahçesi-ne farklı   bölge-ler-den   gel-di.
          bear-PL this zoo-DAT   different region-PL-ABL come-PAST
          'Bears came to this zoo from different regions.'

Overall, the fact that Turkish bare plurals are kind terms as English bare plurals is in line with the number neutral account defended here. It is because plural kinds are derived by the *nom* operator which applies to number neutral properties, i.e. sets of atomic and plural individuals instantiating kinds. On the other hand, if bare plurals were strictly plural, exclusive of atoms, we would not expect them to have kind reference because *nom* would be undefined for them.

It is worth highlighting the following assumptions before concluding this section: First of all, the property denotations of Turkish bare plurals are always derived from their kind reference via *pred*. This differs from the general assumption that bare plurals in English are ambiguous in both being kind terms and having independent property denotations. The motivation for this will become clear in Section 3.3.

Second, differently from English bare plurals, Turkish bare plurals can also have definite interpretations in object-level contexts, in addition to the narrow scope existential readings. This is represented in (15c), but also holds for the other examples given above. The explanation for this follows in the neo-Carlsonian approach, as discussed for other languages without determiners by Dayal (2004). The two principles relevant here are given in (22) and (23).

(22) *Blocking Principle* (Chierchia 1998)
      For any type shifting operation ϕ and for any X: $*\phi(X)$ if there is a Determiner D such that for any set X in its domain, $D(X) = \phi(X)$.

(23) *Revised Meaning Preservation* (Dayal 2004)
      $\{^{\cap}, \iota\} > \exists$

According to (23), type-shifters apply in a certain order, as long as Blocking Principle is respected. English and Turkish bare plurals can both shift via *nom* to yield kind-level meanings

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[7]Schwarzschild (1996) uses the incompatibility of collective/group-denoting nouns with reciprocals and the predicate *live in different cities* to show that collective nouns do not allow access to atoms.

and their DKP-based narrow scope existential readings. Only Turkish bare plurals can also shift via the covert *iota* operator and yield definite readings, as opposed to English where it is blocked by the overt determiner *the*. The low-ranked $\exists$-type shift does not come into play for bare plurals in either language, ruling out the possibility of strong indefinite interpretations.[8]

In summary, bare plurals in Turkish are like bare plurals in English in being kind terms which can directly combine with kind-level predicates via *nom*.

2.3.2. Singular kind terms

What about bare singulars? Just like bare plurals, bare singulars can also combine with kind-level and generic predicates, as shown in (24a) and (24b).

(24)   a.   **Dinozor** 66 milyon 38 bin   yıl önce yok   ol-du.
              dinosaur 66 million 38 thousand year ago extinct be-PAST
              'The dinosaur became extinct 66 million 38 thousand years ago.'
    b.   **Ayı** genelde saldırgan ol-ur.
              bear usually aggressive be-AOR
              'The bear is generally aggressive.'

However, in episodic contexts they are interpreted as strictly singular or definite, as opposed to bare plurals, which, as we have seen, can receive existential readings.

(25)   **Kedi** dışarıda çiftleş-iyor.
       cat   outside mate-PROG
       'The cat is mating outside.'
       Not: 'Cats are mating outside.'or 'The cats are mating outside.'

The lack of existential readings with bare singulars is further shown by their inability to take scope under negation, as shown in (26), where the the singularity and definiteness presuppositions project:

(26)   **Kedi** dışarıda çiftleş-mi-iyor.
       cat   outside mate-NEG-PROG
       'The cat isn't mating outside.'

We can understand the nature of kind reference with bare singulars if we take them to be more like definite singular kind terms in English (e.g. *The dinosaur is extinct.*). Dayal (2004) claims that even though kinds (singular or plural) are conceptually plural, singular kinds are grammatically atomic. They are different from plural (and mass) kinds in not having a semantically transparent relation to their instantiations. Namely, they are impure atomic in the sense of Link (1983) and Landman (1989) behaving more like groups (see also Kleiber 1990, Krifka et al. 1995, and Zucchi and White 2001). Differently from plural kind terms, the *nom* operator maintaining the transparent relation with the relevant property, thereby allowing *pred* to operate on

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[8]The motivations behind Revised Meaning Preservation will not be discussed here, so I refer the reader to Dayal (2004) for details. Revised Meaning Preservation and the definiteness by *iota* also apply to bare singulars.

it, does not apply to singular terms as proposed by Chierchia (1998). Thus, DKP-based existential readings are ruled out. Instead, singular kind terms are directly associated with kinds by referring to them in the taxonomic domain.

Dayal's proposal is based on the idea that common nouns systematically denote properties of ordinary individuals and properties of taxonomic individuals, i.e. (sub-)kinds. Just like other determiners like *every*, *a* and also numerals, when the definite determiner in English combines with the latter, it yields taxonomic readings. Namely, definite singular kinds are derived compositionally from the regular definite determiner and a common noun that denotes a taxonomic property, i.e. $\iota X\ [P(X)]$, X ranging over entities in the taxonomic domain. Consider the following examples (Dayal 2004: pg. 423 & 424): (Adapting the convention in Dayal (2004), from now on singular kinds will be represented with capital letters, whereas the lower case letters will be associated with kinds in general.)

(27)   a.   Every/a/one lion is extinct.
        b.   Two lions are extinct.
        c.   The African lion is extinct.

In (27), the domain of quantification has to be the sub-kinds of the species *lion* because the predicate is a kind-level predicate. In other words, the denotation of the predicate *LION* will include the sub-kinds *AFRICAN LION*, *ASIATIC LION*, *AMERICAN LION*, etc. (27c) differs from (27a) and (27b) in that the existence of the definite determiner imposes a uniqueness requirement. In (27c), the taxonomic property *LION* combines with the taxonomic property *AFRICAN* the denotation of which includes all the African kinds, including *AFRICAN LION*. The intersection of the two yields the singleton set {*AFRICAN LION*}, which type-shifts via *iota* to refer to the unique African lion kind.[9]

The definite determiner can also combine with a taxonomic property if the domain of quantification does not include the sub-kinds of the relevant kind. Consider the interpretation of 'The lion is extinct.' as represented below (Dayal 2004: pg. 426).

(28)   a.   *become-extinct* $(\iota X\ [LION(X)])$
        b. $U_c = \{LION, WHALE, DOG\}$
        c.   *LION'* $= \{LION\}$

Here, the domain of quantification is the set of taxonomic entities in (28b), which does not include the sub-kinds of lions, but instead some distinct kinds like *LION*, *WHALE*, etc. In that case, the extension of the taxonomic predicate *LION* is a singleton set whose only member is the taxonomic individual *LION*, as shown in (28c). The combination of the property *LION* with *iota* ensures the reference to the unique lion kind. Dayal states that what level of the hierarchy will be relevant to the interpretation of taxonomic properties is determined by the context.

Singular definite kind terms in English are not compatible with episodic contexts unless they refer to the whole species as a singleton representative or prototypical object, as in (29a). Namely, they are atomic terms whose only instantiation sets (if available at all) include this individual. This corresponds to singularity in syntactic terms; however, they remain true to the notion of

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[9]See McNally and Boleda (2004) for the analysis of relational adjectives as properties of kinds, which is in line with taxonomic modification.

kind being conceptually plural, as reflected in (29b) (Dayal 2004: pg. 429 & 431).

(29) a. The rat reached Australia in 1770.
      b. The tiger is common in these parts.

This is how they are analogous to group denoting nouns, such as *team* and *committee*, which are similar to pluralities in being conceptually associated with the same set of entities but differ from them in their relations to these entities. To be more precise, the relation between sums and their parts is transparent whereas the one between groups and their members is non-transparent, being impure atomic in nature (Link 1983, Landman 1989, Barker 1992, and Schwarzschild 1996, among others). Dayal takes the lack of existential readings with definite singular kind terms in episodic contexts as evidence for their impure atomicity (cf. Chierchia 1998). There-fore, the object-level readings of singular kind terms are derived by directly ensuring that the property set of this representative object includes only the properties that are associated with the kind itself.

The same facts hold for singular kind terms in Turkish. Since Turkish lacks an overt definite marker, they are realized in bare form to which the covert *iota* operator applies. I also provide further evidence with respect to their impure atomic nature by applying the tests for the acces-sibility of the atomic level introduced in the previous section. Consider the example in (30) where the singular kind term *ayı* is used in an episodic context and is incompatible with the distributive predicate *come from different regions* (cf. with (21b)).

(30) ***Ayı** bu hayvanat bahçesi-ne farklı   bölge-ler-den   gel-di.
      bear this zoo-DAT   different region-PL-ABL come-PAST
      Intended: 'Bears came to this zoo from different regions.'

The sentence in (30) shows that singular kind terms do not allow distributive predication to entities we intuitively associate with them. Otherwise, they would be interpreted like plural kind terms and yield grammatical results with these tests. Since singular kinds are impure atomic, the denotations of bare singulars in object-level contexts as in (25) must be derived without reference to kind formation. More precisely, they denote atomic properties of ordinary individuals independent of being singular kind terms. In cases like (25), *iota* combines with these atomic properties to yield singular definite interpretations. However, as in English, if a singular kind term in Turkish refers to the totality of species as a prototypical object, it is compatible with object-level predicates, as shown in (31).

(31) **Bilgisayar** bu ülke-ye   çok geç gel-di.
      computer   this country-DAT very late come-PAST
      'The computer reached this country very late.'

Similarly, singular kind terms are acceptable in generic sentences if they refer to the whole species as a singleton representative object, as shown in (32) (Dayal 2004: pg. 431). This is also the case in Turkish, as exemplified in (24b) above.

(32) The dog barks when it is hungry.

The fact that singular kind terms block access to the instantiations also holds for generic con-

texts, as evidenced by their incompatibility with reciprocals (cf. with (21a)).[10]

(33) *__Kedi__ birbiri-ne   saldır-ır.
       cat   each.other-DAT attack-AOR
       Intended: 'Cats attack each other.'

If bare singulars were number neutral and bare plurals were strictly plural, exclusive of atoms, we would expect bare singulars to have plural kind reference and bare plurals to have no kind-reference. In that case, bare singulars would undergo type-shifting by *nom* to refer to kinds and get instantiated by *pred* in generic and episodic contexts. As a result, they would have DKP-based narrow scope existential readings and be compatible with distributivity, making them akin to plural kind terms. The strict singularity of bare singulars and number neutrality of bare plurals in Turkish defended in this paper are compatible with singular kind reference of bare singulars as well as plural kind reference of bare plurals, as in English.

To summarize, Turkish is similar to English in that its bare plurals are kind terms whose object-level interpretations are derived via *pred* and DKP (or via *iota*). Additionally, its bare singulars are ambiguous in denoting atomic properties of ordinary individuals and atomic properties of taxonomic individuals, i.e. (sub-)kinds. When they combine with a kind-level predicate, their taxonomic property denotation shifts via *iota* to yield singular kind readings. In object-level contexts, their ordinary-individual property denotation shifts via *iota* to yield singular definite readings, unless a prototypical representation of the kind is meant.

2.3.3. Comparing singular and plural kind terms

Let us discuss the views that I adopt here with respect to the differences between singular and plurals kind terms. First, as stated above, differently from plural kind terms, singular kind terms are directly associated with kinds by denoting unique taxonomic individuals. They are not constructed from sets of instantiations realizing them because the *nom* operator is undefined for singular terms as proposed by Chierchia (1998), and appealing to the taxonomic domain is the only way for them to refer to kinds. This further suggests that the application of *pred* is also undefined for singular kind terms making it impossible for them to be instantiated in this way, since *pred* operates on the outcome of the *nom* operator.

Would it still be possible to represent the relation between singular kinds and the instantiations that we intuitively associate with them in another way? This could be achieved by Carlson's (1977) Realization (R) relation which relates kinds to their instantiations, i.e. $R(x,y)$ where y is a kind and x is an individual corresponding to the instantiations of that kind. So, a formula $R(x,y)$ states that x belongs to the kind y.[11] However, we have seen that singular kind terms

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[10]Unlike (33), the generic version of (30) is acceptable by some speakers: *Ayı bu hayvanat bahçesine farklı bölgelerden gelir.* 'The bear comes to this zoo from different regions.' It does not express generic situations each of which consists of bears coming from different regions. Rather, the distributivity is over the situations/events that the generic operator quantifies over. So, in situation 1, they come from Asia, in situation 2, from Africa, etc. This is expected given the impure atomic nature of singular kind terms.

[11]This paper treats R to be different from *pred*. The latter is a way of type-shifting back to the property denoted by bare plurals that *nom* operates on to derive kind-reference. The former, though, is the relation between kind individuals in general and specimens realizing them. This distinction will be relevant to event kinds in Section

have an impure atomic nature, and they would not be different from plural kind terms in their behavior if R could apply to them. They would be type-shifted to sets of instantiations by lambda abstraction over x, i.e. $\lambda x. R(x, y)$. This would not be desirable given the facts explored with respect to singular kinds. Thus, although singular kinds are conceptually related to the specimens instantiating them, this relation is not represented in the grammatical component. I suggest that this is related to the following contrast between singular and plural kind reference.

Kind-referring nouns are considered as names of kinds (Langford 1949, Carlson 1977, Heyer 1985, Krifka et al. 1995). A context where they behave like proper names is the *so called* construction (observed by Carlson 1977), as shown below (Krifka et al. 1995: pg. 65).

(34)   The liger is/ Ligers are so called because it is/ they are off-spring of a lion and a tiger.

However, a fact noted in the literature, but never fully explained is an unexpected restriction on kind terms with the verb *invent* with respect to singular vs. plural kinds, as shown in (35a). In light of the claim that all kind-referring nouns are names of kinds, we do not expect any difference between the two. Krifka et al. (1995) relate the weirdness of plural kind terms in this context to their occurrence in the object position since in the passivized version they are acceptable, as shown in (35b).

(35)   a.   Charles Babbage invented the computer/?computers.
        b.   The computer was/Computers were invented by Charles Babbage.

In Turkish, though, plural kind terms are ungrammatical with the verb *invent* as opposed to singular kind terms regardless of the structure.

(36)   a.   Charles Babbage **bilgisayar(*-lar)-ı** icat et-ti.
              Charles Babbage computer-PL-ACC invent-PAST
              'Charles Babbage invented the computer.'
        b.   **Bilgisayar(*-lar)** Charles Babbage tarafından icat ed-il-di.
              computer-PL   Charles Babbage by   invent-PASS-PAST
              'The computer was invented by Charles Babbage.'

This contrast can be explained if we pursue a Jespersonian way of thinking, where singular kind terms are considered as names of kinds that is associated with kinds themselves, whereas plural kind terms are the reflection of the relation between kinds and their instantiations in grammatical terms (Jesperson 1927). Turkish prefers to make use of singular kind terms whenever the kind or the concept itself is being referred to whereas it uses plural kind terms whenever the reference is via or to the instantiations of the kind. I am aware of the problem that this way of thinking does not fully account for the English case, but it offers a principled explanation for the differences between singular and plural kind terms in Turkish. These differences will be made clearer in Section 3, but before going on let me present the proposal in a nutshell.

If we are talking about an invention, the instantiations of the kind are not relevant because the invention of a kind is not directly associated with its instantiations. If you invent the computer, you actually come up with the design of it (a stereotype), hence create a concept of the computer kind. The application of it to the concrete machines that would constitute the instantiations

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3.1.2. Following Krifka et al. (1995), I do not consider stages for R, differently from Carlson (1977).

of the computer kind comes as a subsequent step. Even if only one computer as a concrete machine had been produced, the computer would have been invented. Therefore, the singular kind term is chosen over the plural form in Turkish.

On the other hand, when we talk about the extinction of a kind, we can either refer to the kind by naming it with the singular form or we can make reference to the kind via the totality of its instantiations with the plural form. It is because for a kind to be extinct, all of the members of the species have to die/disappear. In such contexts the reference to kinds can easily be derived from their instantiations. In fact, in the extinction context where the interpretation of the kind-level predicate depends highly on the instantiations of the kind, bare plurals arguably sound slightly more natural than bare singulars.

The idea that singular kind terms are names of kinds can be supported by the *dediğin* 'that you call' construction exemplified below.[12] With this construction you refer to the kind individual by specifying what you call it, therefore, it can be considered as an alternative to the English *so called* construction. Interestingly, the *dediğin* construction is only good with singular forms.

(37)   **Bilgisayar(*-lar)** dediğin   Charles Babbage tarafından icat ed-il-di.
       computer-PL   that.you.call Charles Babbage by   invent-PASS-PAST
       Literally: 'The kind that you call 'the computer' was invented by Charles Babbage.'

To summarize, putting aside the explanation for cross-linguistic differences, in this paper singular kind terms are considered more like proper names that refer to kind individuals directly as opposed to their plural counterparts, which represent a derived way of referring to kinds. We can safely conclude that Turkish has grammaticized this distinction.

To wrap up the discussion so far, we have seen two types of evidence showing that bare singulars in Turkish are semantically singular. One was their singularity in case-marked argument positions and the other was their singular kind reference. Accompanied by the number neutrality of bare plurals, I conclude that there is an asymmetry between morphological and semantic (un-)markedness in Turkish.

3. Explaining Neutrality

Having established the status of bare singulars as atomic terms I now take up the challenge posed by those constructions where bare singulars have neutral interpretation: the non-case marked argument position, the existential copular construction, and the predicate position. The corresponding sentences (3), (4), and (2) introduced in Section 2.1 are repeated below.

(38)   a.   Ali **kitap** oku-du.
            Ali book read-PAST
            'Ali did book-reading.' (one or more books)
       b.   İçeride **fare**   var.
            inside   mouse exist
            'There is a mouse/are mice inside.'

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[12]This construction is usually used in generic contexts though it is also good with kind-level predicates, as shown above. It is compatible with episodic contexts only if the reference is to a kind. Addition of *dediğin* would not be good in formal contexts because it adds an informal flavor to the interpretation.

c. Ali ve Merve **çocuk**.
    Ali and Merve child
    'Ali and Merve are children.'

I claim that bare singulars occur as singular kind terms in these constructions, and the apparent number neutrality stems from the conceptual plurality of singular kinds. I will now elaborate on the details of the explanation for each case.

3.1. Pseudo-incorporation

Öztürk (2005) claims that non-case marked bare singulars immediately preceding the verb and occupying the direct object position as in (38a) are instances of pseudo-noun incorporation (PI, henceforth), a term originally due to Massam (2001).

Syntactically, PI-ed bare singulars form a unit with the verb, but at the same time retain their independent phrasal status. By this unity, it is meant that (i) they immediately precede the verb occupying a VP internal position, and (ii) they are unable to undergo case-driven movements such as passivization. However, it should be noted that PI-ed objects can be separated from the verb for discourse related reasons (contrastive topic or focus), as shown by Gračanin-Yüksek and İşsever (2011) for Turkish (see also Dayal 2003, 2011 for Hindi). They differ from canonical arguments, e.g. definites, quantified expressions, etc., in not bearing a case marker.

Despite their non-canonical properties, PI-ed bare singulars can still be considered syntactic arguments of verbs, because in their presence an extra object with the same thematic role cannot be added to the structure, as shown in (39) (Öztürk 2005: pg. 111). This contrasts with PI in Chamorro, where theme-doubling is possible (Chung and Ladusaw 2004).

(39) *Ali Romeo ve Juliet(-i) **kitap** oku-du.
       Ali Romeo and Juliet-ACC book read-PAST
       Literally intended: 'Ali did book-reading Romeo and Juliet.'

In addition, PI-ed bare singulars block the assignment of accusative case associated with direct objects to other elements in the structure. Öztürk (2005) shows this by a contrast with unergative constructions which lack an object position. When an unergative verb is causativized in Turkish, the agent receives accusative case-marking, as shown in (40a). However, when a transitive verb is causativized, the agent receives dative case-marking, as shown in (40b) (Öztürk 2005: pg. 109).

(40) a. Ayşe Ali-yi koş-tur-du.
          Ayşe Ali-ACC run-CAUS-PAST
          'Ayşe made Ali run.'
      b. Ayşe Ali-ye/*-yi balığ-ı tut-tur-du.
          Ayşe Ali-DAT/ACC fish-ACC catch-CAUS-PAST
          'Ayşe made Ali catch the fish.'

When a pseudo-incorporated verb is causativized, the agent receives the dative case-marking on a par with transitive verbs, as shown in (41) (Öztürk 2005: pg. 109).

(41)   Ayşe Ali-ye/*-yi   balık tut-tur-du.
        Ayşe Ali-DAT/ACC fish   catch-CAUS-PAST
        'Ayşe made Ali go fishing.'

Öztürk explains this on the view that PI-ed bare singulars are structurally associated with the accusative case although not receiving it on themselves. This can be considered as further support for their syntactic argument status.

The semantics of PI has been the focus of a number of accounts (van Geenhoven 1998, Chung and Ladusaw 2004, Farkas and De Swart 2003, Dayal 2003, 2011, 2015, among others), all of which agree that PI-ed nouns are property denoting. Among the semantic accounts, Dayal (2011, 2015) claims that they simply modify the verb, the result of which denotes a predicate of subtypes of events. Number neutrality and obligatory narrow scope are the hallmarks of these structures. Dayal associates their number neutrality with atelicitiy, and explains their narrow scope property by the view that any element taking scope over the verb will also take scope over its nominal modifier (see also Sadock 1980, Bittner 1994, van Geenhoven 1998, Farkas and De Swart 2003, Farkas and De Swart 2003.)

I argue that PI-ed bare singulars in Turkish take part in sub-event kinds/types together with the incorporating verb in line with Dayal (2011), but as singular kind arguments introduced at the event kind domain rather than as nominal modifiers of the verb. In this way, their (non-canonical) syntactic argument status is reflected semantically, as well as keeping them separate from canonical arguments which are introduced at the event token domain. The number neutrality of PI-ed bare singulars is explained as an inference achieved by means of the conceptual plurality of singular kinds. Since they are not treated as properties here, obligatory narrow scope will be accounted as deriving from the argumentation at the event kind domain.

3.1.1. Psuedo-incorporated bare singulars as singular kind terms

Let me start by establishing that PI-ed bare singulars are singular kind terms, based on the following facts, which could not be explained directly if they denoted properties. Firstly, we have previously seen that their property denotation is atomic. If PI-ed bare singulars denoted properties, we would not expect them to receive a number neutral interpretation.[13] Second, modification is incompatible with them, requiring the indefinite or plural forms, unless it is meant to operate at the taxonomic domain, establishing sub-kinds. This is shown in (42a) and (42b). (The test is adopted from Aguilar-Guevara and Zwarts 2010.)

(42)   a. *İçeri girdiğimde   Ali *eski* **kitap** oku-yor-du.
            inside when.I.entered Ali old book read-PROG-PAST
            'When I entered inside, Ali was reading an old book/old books.
        b. İçeri girdiğimde   Ali *dini*   **kitap** oku-yor-du.
            inside when.I.entered Ali religious book read-PROG-PAST
            'When I entered inside, Ali was doing religious book-reading.'

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[13]Dayal (2011) argues that Hindi PI-ed bare singulars denote atomic properties, but number neutrality is achieved as a result of their interaction with atelicity. Though in telic contexts singularity is more salient in the Turkish case in line with that view, it is not obligatory.

This contrast stems from the fact that singular kinds are built on taxonomic properties, not the ones of ordinary objects/individuals. (42a) is bad because the adjective *old* can be considered as operating at the level of ordinary objects with a meaning like *worn-out* or *old* in terms of its publication date, whereas the adjective *religious* in (42b) can define a sub-kind of the book kind, hence it is compatible with the PI-ed singular kind. Since singular kinds are impure atomic their instantiation sets are not grammatically accessible, so singular kind terms cannot be type-shifted to sets of individuals suitable for modification as in (42a). We would not expect such a contrast, if PI-ed bare singulars denoted properties.

Notice that the adjective *old* can be acceptable if it defines a sub-kind of the book kind with a meaning like 'ancient/historical' and adjectives like *religious* can also modify at the ordinary object level occurring with indefinite or plural forms, e.g. *dini bir kitap* 'a religious book'. Given that common nouns have both object-level and taxonomic-level denotations (i.e. bare singulars, á la Dayal 2004), their modifiers are also expected to operate at both levels. The point here is that differently from modifiers that operate only at the level of ordinary objects like *old* as meant in (42a), modifiers like *religious* also have taxonomic property denotations that are compatible with singular kinds, hence we see the contrast given above.

Overall, these facts call for a taxonomic analysis for PI-ed bare singulars. Before proceeding with the details below, I will address an issue raised by two reviewers: object-level modification of a non-case-marked bare singular is possible in generic contexts. Compare *eski kitap* 'old book' in (42a) with the one in (43).

(43) Ali genellikle *eski* **kitap** oku-r,   çünkü yıpran-mış sayfa-lar-ın
      Ali generally old book read-AOR because worn.out   page-PL-GEN
      koku-su-nu   çok sev-er.
      scent-3POSS-ACC very like-AOR
      'Ali generally reads old books because he likes the scent of worn-out pages very much.'

Assuming that *eski* 'old' is a predicate of ordinary objects, we predict a contrast based on whether the sentence is episodic or generic. According to Dayal's 2004 Revised Meaning Preservation, *eski kitap* 'old book' receives a definite singular reading since *iota* is ranked above ∃-type shift. In an episodic context, this requires accusative case-marking on the noun, as represented in (44a), the denotation of which is given in (44b).[14]

(44) a. Ali *eski* **kitab-ı**   oku-du.
          Ali old book-ACC read-past
          'Ali read the old (worn-out) book.'
      b. $[\![(44a)]\!] = read\ (Ali,\ \iota x\ [old(x) \wedge book(x)])$

In the generic case, however, the number neutrality can arise because the singular term is in the restrictor of the Generic operator, as illustrated in (45). Quantification in this case is over

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[14]For some speakers, *eski kitap* 'old book' is still possible without case-marking in episodic contexts if it is focused contrastively. In this case, it is interpreted as a narrow scope existential. E.g. *Ali ESKİ kitap okuyordu, yeni değil.* 'Ali was reading an OLD book, not new.' One explanation would be in line with Rooth (1985), where it is argued that focus-marked elements introduce sets of alternatives and the union of these alternatives brings with it an existential presupposition (cf. Krifka 1992, and von Vintel 1994). Notice also that this use of bare singulars is only possible with a singular interpretation, not a plural one, which further shows that it is not an instance of PI.

situations, each of which has a unique old book in it. The uniqueness effect is therefore diluted, which, I believe, is reflected by the lack of accusative case-marking on the noun.[15].

(45) $\llbracket (43) \rrbracket = Gen \; s, x \; [s$ is a normal reading situation $\& \; x$ is $\iota y \; [old(y) \wedge book(y)]$ in $s]$
         $[$Ali reads x in $s]$

So, in order to understand the behavior of bare singulars in the non-case-marked direct object position, one needs to eliminate the genericity factor that would blur the contrast created by the taxonomic and object-level modifiers by independent reasons.

Having established that, now I will return to the details of taxonomic modification. It is usually available with adjectives rather than more complex structures like postpositional phrases and relative clauses. However, what kind and structure of modification counts as taxonomic depends on the noun that is modified and the context. For example, modification by colors (with or without a postpositional phrase) can normally be considered as operating at the ordinary object level in a book-reading context, but it can also easily be considered as sub-kind denoting (classificatory) if the noun modified is an artifact like *bardak* 'glass', as in (46).

(46)   *Yeşil (renk-li)* **bardak** al-dı-m.
         green color-with glass   buy-PAST-1SG
         'I bought a green glass/green glasses.'

In addition, it is possible for some relative clauses to function as taxonomic modifiers, as exemplified in (47) (Öztürk 2005: pg. 40).

(47)   Ali *oku-yacak* **kitap** al-dı.
         Ali read-FUT book buy-PAST
         'Ali bought a book/books to read (for spare-time reading.)'

Here, *okuyacak* 'to read' does not modify at the level of ordinary objects, instead adds the meaning 'for spare-time reading'. It could be considered as defining a sub-kind of the book kind based on a purposive classification. Since books have different types based on different purposes, such kind of a classification would not be odd to consider as sub-kind forming for the book kind. So, books for spare-time reading would be one kind, and books for studying, books for coloring, etc. would be other kinds of books in that terms.

I suggest that *okuyacak* 'to read' can modify at the taxonomic domain since it is derived from the PI structure *book-read* and it yields bouletic modality conveying future possibility based on salient desires/purposes, which, in our case, is spare-time reading. Such relative clauses which are realized in the infinitival form in English are analyzed as internally headed in Hackl and Nissenbaum (2011) (see also Carlson 1977, Sauerland 1998, among others). NPs modified by these relative clauses are base-generated inside the relative clause and raise out of it for modification, but they are interpreted in their base position, as illustrated in (48). This contrasts with externally headed relative clause structures which require adjunction to a matching external NP.

(48)   *okuyacak kitap = iota* [$_{Rel \; Clause}$ [$_{NP}$ book]$_i$ PRO to t_i-read]]

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[15]See also Dayal (2011) for other cases where uniqueness effects are diluted.

This makes it possible for the bare singular *kitap* 'book' to be interpreted as part of the PI meaning, *book-reading*, hence as a singular kind, even if it raises out of the PI structure to be modified by the relative clause *okuyacak* 'to read'. Based on this, the informal denotation of *okuyacak kitap* 'book to read' is given in (49). Depending on the context, the result can denote any of the book kinds like novels, comics, etc. each of which goes under the category of books for spare-time reading.[16]

(49)   The unique (sub-)kind X s.t. there is at least one world w" that is a possible develop-
        ment of some w' that is consistent with some goal held in w' (spare-time reading), and
        in which PRO does BOOK(X)-reading (i.e. X is a sub-kind of the book kind and that
        kind is compatible with the goal of spare-time reading).

To wrap up, considering the facts stated above, I argue that PI-ed bare singulars in Turkish are singular kind terms.

The analysis that I am arguing for has also been proposed by Aguilar-Guevara and Zwarts (2010) for weak definites in English (e.g. *Lola is reading the newspaper.*). Weak definites show very similar behavior to PI-ed bare singulars in not having a unique reference, being only compatible with taxonomic modification, and having narrow scope interpretations (cf. Dayal 2015). Aguilar-Guevara and Zwarts claim that they are actually singular definite kinds that stand in Carlson's (1977) Realization relation (R) with the implicit theme argument of the verb (cf. Schwarz 2014). In other words, the implicit theme argument instantiates the singular kind. Their analysis of *Lola is reading the newspaper*, where the Neo-Davidosonian semantics is adopted is given below (Aguilar-Guevara and Zwarts 2010: pg. 187). N stands for the singular newspaper kind in their representation.[17]

(50)   ⟦*Lola is reading the newspaper*⟧ $= \exists e\ [read(e) \wedge Ag(e) = \text{Lola} \wedge R(Th(e), N)]$

A unified semantics can be adopted for both weak definites of English and PI-ed bare singulars of Turkish given that they are both singular kind terms and they have similar behavior. Aguilar-Guevara and Zwarts' analysis could be a good way to capture this unity, but it comes with a problem. Singular kinds are impure atomic, so they do not allow grammatical access to instantiation sets, as shown previously in Sections 2.3.2 and 2.3.3. Therefore, $R(Th(e), N)$ part of the analysis (i.e. the implicit argument instantiating the singular kind) cannot be pursued.

Then, the next issue to be resolved is the status of PI-ed bare singulars in the semantic representation. I claim that they are semantic (thematic) arguments in line with their syntactic argument status. However, we also need to keep them apart from canonical, case-marked arguments. Below, I provide an analysis of PI in Turkish based on an event-based semantics, though it can be considered as applying to weak definites of English, as well.

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[16]Since the singular kind term is interpreted internally, the arguments introduced above it do not affect the taxonomic interpretation of the relative clause. E.g. *Ali akşamları çocuklarına okuyacak kitap aldı.* 'Ali bought a book/books to read to his kids in the evenings.'

[17]They also use a two place predicate $U(e, K)$ to represent the additional stereotypical interpretation restriction in the weak definites of English. See Aguilar-Guevara and Zwarts (2010) for further details. Note that Turkish PI is highly unrestricted in this respect compared to the weak definites of English.

3.1.2. Pseudo-incorporation as sub-event kind formation

I follow the claim that there are event kinds (represented as e^k of type $\langle v_k \rangle$) as well as event tokens (represented as e of type $\langle v \rangle$) in the ontology as pursued in Schäfer (2007) and Gehrke and McNally (2011) (see also Barwise and Perry 1983, Landman and Morzycki 2003, Ginzburg 2005, and references therein). In light of this claim, verbs can denote properties of event kinds in addition to the general assumption that they can denote properties of event tokens: $[\![read^{kind}]\!]$ $= \lambda e^k \ [read(e^k)]$ and $[\![read^{token}]\!] = \lambda e \ [read(e)]$

Just as is the case within event tokens, argument saturation is also possible within event kinds. The argument positions of event kinds are only filled by kind denoting arguments given that this is the domain of kinds, and the result of this yields a sub-event kind interpretation (cf. XXX).[18] In light of this, the property of the book-reading event kind, a sub-kind of the reading event kind, is derived as in (51). The thematic functions like Theme are considered to apply both at the event kind and event token domains.

(51)   a. $[\![read^{kind}]\!] = \lambda e^k \ [read(e^k)]$
         b. $[\![Th^{kind}]\!] = \lambda x^k \ \lambda e^k \ [Th(e^k) = x^k]$
         c. $[\![book^{KIND}]\!] = \iota X \ [BOOK(X)]$
         d. $[\![Th \ book^{KIND}]\!] = \lambda e^k \ [Th(e^k) = \iota X \ [BOOK(X)]]$
         e. $[\![book\text{-}read^{kind}]\!] = \lambda e^k \ [read(e^k) \wedge Th(e^k) = \iota X \ [BOOK(X)]]$

I argue that this sub-event kind forming process is an instance of PI. The singular kind term *book* does not refer to any actual books. Rather, its role is to restrict the reading event kind by participating in it as a theme argument.[19] Namely, PI is a process where the taxonomy of event kinds is determined by thematic arguments that are kinds (cf. Espinal and McNally 2011).

The next step is to combine this sub-event kind with an agent argument such as *Ali* to yield an interpretable sentence. Since the event kind domain is only compatible with kind-level arguments, to introduce a non-kind argument we need a mechanism to shift from the event kind domain to the domain of event tokens. For this, I suggest the following type shifting operator which I will call ET, short for *event-tokenizer*. Since event kinds are considered to be distinct taxonomic entities that are not derived from a property correlate via *nom*, *pred* does not apply to them. Instead, the instantiation is represented with Carlson's Realization relation R, applied to event kinds.

(52) $[\![ET]\!] = \lambda P_{\langle v_k, t \rangle} \ \lambda e \ \exists e^k \ [R(e, e^k) \wedge P(e^k)]$

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[18]Kind-level and object-level predicates are distinct notions from event kinds and event tokens. The former are inherently related to verbs whereas the latter are related to events although events are still included in the denotations of verbs. For example, *read* is an object-level predicate, but can denote a set of event kinds as well as event tokens. At the event token domain, it is expected to combine with object-level arguments. At the event kind domain, it combines with a kind argument since as stated above, the event kind domain is only compatible with kind arguments, and this is regardless of the distinction of kind vs. object-level predicates. On the other hand, a kind term can still be an argument at the event token domain as long as it combines with a kind-level predicate. When it combines with an object-level predicate at the event token domain, it undergoes type-shifting if it is a plural kind term, or it receives a representative object reading if it is a singular kind term. See Section 3.1.3.

[19]Mithun (1984) shows that kind-referring nouns are normally incorporated in languages having incorporation. Following Mithun, Krifka et al. (1995) argue that incorporated nouns refer to kinds, and noun incorporation is a syntactic device to stay in the kind-oriented mode. This idea is very similar to what is proposed here.

The ET operator takes a set of event kinds and returns a set of atomic event tokens and their sums that instantiate an event kind in the set of event kinds. It can be considered as operating regardless of PI under the assumption that verbs basically start as denoting properties of event kinds. This is not an implausible assumption given that languages have verbal classifiers analogous to the nominal domain (Yang 2001 and Landman 2006) and that classifiers are functions over kinds (Krifka 1995 and Chierchia 1998). ET is necessary to shift from the event kind domain to the domain of event tokens both because canonical arguments are introduced in the event token domain and because the final $\exists$-closure of sentences occurs with event tokens.

One might expect taxonomic event kinds to be impure atomic, hence not allowing instantiation, just as is the case with taxonomic kinds in the nominal domain. Notice that the nominal domain has a separate mechanism to reflect the relation between kinds and their instantiations, namely plural forms. In Turkish and English, event kinds do not have such a dual configuration to distinguish between group-like vs. sum-like kinds evidenced by the lack of a distinctive morpheme that would appear on verbs to mark the latter (e.g. pluractional markers). Therefore, in these languages the domain of event kinds can be considered as a domain where the (non-)atomicity distinction of kinds does not emerge.[20]

In light of this, the application of ET to the book-reading event kind results as follows.

(53) $[\![ET\ book\text{-}read^{kind}]\!] = \lambda e\ \exists e^k\ [R(e, e^k) \wedge read(e^k) \wedge Th(e^k) = \iota X\ [BOOK(X)]]$

Consecutively, this set of event tokens will take an agent argument and be existentially closed, as shown below (ignoring tense).

(54)   a. $[\![Ag^{token}]\!] = \lambda x\ \lambda e\ [Ag(e) = x]$
       b. $[\![Ali]\!] = \text{Ali}$
       c. $[\![Ag\ Ali]\!] = \lambda e\ [Ag(e) = Ali]$
       d. $[\![Ali\ ET\ book\text{-}read^{kind}]\!] = \lambda e\ \exists e^k\ [R(e, e^k) \wedge read(e^k) \wedge Th(e^k) = \iota X\ [BOOK(X)]$
                   $\wedge\ Ag(e) = Ali]$
       e. $[\![\exists]\!] = \lambda P_{\langle v,t\rangle}\ \exists e\ [P(e)]$
       f. $[\![Ali\ ET\ book\text{-}read^{kind}]\!] = \exists e\ \exists e^k\ [R(e, e^k) \wedge read(e^k) \wedge Th(e^k) = \iota X\ [BOOK(X)]$
                   $\wedge\ Ag(e) = Ali]$

Here, Ali is involved in an instance of the book-reading event kind. The assertion that at least one episodic event token (instance) of this event kind exists will correspond to the inference of reading one or more books, i.e. the instantiations that the singular book kind is conceptually associated with. This is in line with the number neutral interpretation of PI-ed bare singulars.

My analysis predicts the narrow scope interpretation of PI-ed bare singulars as follows: Since the singular kind term is tied to the event variable in a local way, we also account for the seemingly narrow scope interpretation, as exemplified below. The event quantifier takes narrow scope with respect to the other quantificational elements, therefore the event kind quantifier which is inside the event token quantifier, takes narrow scope, too. Being a part of the event kind, the PI-ed singular kind term is also interpreted under the scope taking elements.[21]

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[20]An analogy can be drawn with mass kind terms, which do not show number distinction, hence do not have an (non-)atomicity issue in taxonomic kind interpretations. See Dayal (2004) for mass kinds.

[21]One other issue that is widely discussed in PI literature is non-referentiality. As widely known, this is a very

(55) a.   Ali **kitap** oku-ma-dı.
             Ali book read-NEG-PAST
             'Ali didn't do book-reading.' (no books)
       b. $\neg \exists e \, \exists e^k \, [R(e, e^k) \wedge read(e^k) \wedge Th(e^k) = \iota X \, [BOOK(X)] \wedge Ag(e) = Ali]$

In summary, the aim of this section has been to show that bare singulars occurring as non-case-marked objects are singular kind terms that participate in sub-event kind formation being introduced at the event kind domain. Their number neutral interpretation is an inference due to the conceptual plurality of singular kinds.

3.1.3. Differences from canonical arguments

Having established the main argumentation of the claim, now let us turn to the difference between PI-ed singular kind terms and canonical arguments that receive case and have a freer status in the structure. How do they differ?

The only difference is that PI-ed singular kinds are introduced at the event kind domain, resulting in a sub-event kind interpretation as opposed to canonical arguments which are introduced at the event token domain. Since the taxonomy of event kinds are formed in the event kind domain, the arguments introduced here are also expected to be kinds rather than ordinary objects. In the next section, I will discuss that plural kinds are dispreferred for PI, instead they are canonical arguments introduced within event tokens, so this leaves us with singular kinds as the only candidate for PI in Turkish. A stricter syntactic unity observed in PI is unsurprising given that the incorporating verb and the singular kind term form a sub-kind of an event kind together which happens before the shift from the event kind domain to the event token domain happens. In other words, singular kinds taking part in sub-event kind formation form a relation with the event in a deeper level and this is reflected by a stricter syntactic unity with the verb compared to canonical arguments.

It seems that argument saturation within event kinds is not reflected by case-marking as opposed to the one occurring within event tokens.[22] Öztürk (2005) claims that case assignment is not achieved by verbs but higher functional heads that she calls Theme, Agent, etc. Unlike canonical arguments introduced by the latter, PI-ed nouns are complements to verbs, hence they do not receive case marking. Despite being a plausible explanation reflecting our analysis, this issue is left for further considerations since case marking of direct objects seems to be related to specificity/definiteness vs. non-specificity rather than just being restricted to an instance of this issue, non-PI vs. PI (Enç 1991 and von Heusinger and Kornfilt 2005). Thus, it is a reflection of a more general phenomenon which needs further study. In other words, as

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tricky empirical domain, and speakers that I have consulted do not provide uniform or generalizable judgments regarding anaphoric reference in PI. Therefore, it will not be addressed in this paper, awaiting more systematic judgment elicitations. See Krifka and Modarresi (2016) for an analysis of referentiality in PI of Persian, which shows similarities to Turkish in many aspects.

[22] The PI of indirect objects is not as widely attested as direct objects, though possible. When they PI, they do not receive case marking, e.g. *çocuk bakmak* 'to do baby-sitting; *çocuk* receives dative case in the non-PI-ed version. However, if the case marking expresses location then it is still preserved in PI, e.g. *doktor-a çıkmak* 'to go to the doctor' (Jo and Palaz 2019). This can still be considered to be an instance of PI since the goal/location bears the signature properties of it: number neutral and narrow scope interpretations, and the possibility of modification only in the taxonomic domain. See Jo and Palaz (2019) for the syntactic details.

will be discussed in the following section, bare plurals, numeral constructions, and indefinites formed with the numeral *bir* 'one' (weak indefinites) can also occur in the non-case-marked direct object position where they are interpreted as non-specific. This contrasts with numeral constructions and *bir*-indefinites that are interpreted as specific, specific indefinites with *bazı* 'some', universal quantifiers, pronouns, proper names, and definites, which receive case.

However, throughout the rest of this paper the gist of Öztürk's analysis will be taken as a general assumption for the case assignment in Turkish. In other words, we will assume that non-case-marked arguments, whether they are PI-ed or just non-specific, are introduced by the verb, whereas case-marked arguments are introduced by some higher functional heads, the exact nature of which is not directly relevant to this paper.

A good paradigm to understand these issues is provided by the following contrast with respect to case-marking on proper names:

(56)   Bugünlerde **Çalıkuşu** oku-yor-um.
         nowadays   Çalıkuşu read-PROG-1SG
         'Nowadays, I do Çalıkuşu-reading.'

Although proper names are listed as one of the elements that receive case-marking above, there are some cases where they appear non-case-marked. Famous book and movie names constitute a good example for this, as shown in (56) (Çalıkuşu is a famous Turkish novel).

I believe that (56) is an instance of PI and that is why the proper name *Çalıkuşu* appears without case marking. Here, it is a kind term in the sense that it refers to the totality of all the physical copies of a famous novel as an abstract concept. Since it is a very well-known novel, reading events involving one or more of its instantiations could be considered as a noteworthy and typical event type. Namely, the proper name *Çalıkuşu* represents a kind of books in (56) and its argumentation to the reading event kind represents a sub-kind of the reading event kind, Çalıkuşu-reading. Such kind of a configuration is not possible with unfamous book names.

On the other hand, it does not mean that all proper names that refer to some famous entity can always be PI-ed. Only those that have potential to be associated with some instantiating entities can be a non-case-marked argument. For example, although commemorating Atatürk, the founder of the Republic of Turkey, can be considered as a noteworthy and typical event for the people of Turkey, the proper name *Atatürk* cannot be PI-ed. Instead, it has to receive the accusative case marker, as shown in (57).

(57)   Her yıl on Kasım-da   **Atatürk*(-ü)** an-ıyor-uz.
         every year ten November-LOC Atatürk-ACC commemorate-PROG-1PL
         'Every year on the 10th of November, we commemorate Atatürk.'

It is because there are no entities that could instantiate the unique founder of the Republic of Turkey unlike famous books and movies for which their physical copies are good candidates. Therefore, the proper name *Atatürk* cannot be considered as a kind-denoting term, which, in turn, cannot participate in PI. The contrast between (56) and (57) supports the claim that PI is really a matter of kind terms.

That being said, now I will discuss the distinctions between PI-ed singular kind terms and singular kind terms that are canonical arguments within event tokens, receiving case. We have already seen examples of the latter in Section 2.3.2: the case where they occur with a kind-level predicate, as in (58a), or the case where they occur with an object-level predicate referring to the totality of the kind as a representative object, as in (58b) (see fn 18).

(58) a. Charles Babbage **bilgisayar-ı**   icat et-ti.
          Charles Babbage computer-ACC invent-PAST
          'Charles Babbage invented the computer.'
      b. Bu ülke   **bilgisayar-a**   çok geç kavuş-tu.
          this country computer-DAT very late have-PAST
          'This country had (obtained) the computer very late.'

In the former, the singular kind term is an argument to a kind-level predicate, therefore it refers to the computer kind. In the latter, it is an argument to an object-level predicate, therefore it receives an object-level interpretation, referring to the computer kind as a representative object. In both cases, the argumentation occurs at the event token level.

PI is similar to (58a), but different from (58b), in that a PI-ed singular kind term refers to the kind itself, hence does not have a representative object interpretation. On the other hand, it is different from (58a) in that a PI-ed singular kind is introduced within the event kind domain, hence participating in the sub-event kind formation.

The argumentation of a singular kind at the event token domain should not differ from PI in terms of the modification facts and number neutrality. In other words, modification at the taxonomic domain and the number neutral inference due to the conceptual plurality are the properties of singular kinds that are independent of the domain that they are introduced at. However, we expect a difference between the two in their scope taking properties. The narrow scope interpretation of singular kind terms is only possible if they are PI-ed, in other words if they are tied to an event kind quantifier. Otherwise, given their definite status they are expected to be scopally inert. This prediction is borne out as is evident in the following contrast:

(59) Sonunda bu hayvanat bahçesi-ne **ayı(-yı)**   getir-di-ler.
      finally   this zoo-DAT   bear-ACC bring-PAST-3PL
      with ACC: 'Finally, they brought the bear (kind) to this zoo.'
      without ACC: 'Finally, they did bear-bringing/delivery to this zoo.'

(60) Sonunda her   kurum   bu hayvanat bahçesi-ne **ayı-(#yı)** getir-di.
      finally   every foundation this zoo-DAT   bear-ACC bring-PAST-3PL
      with ACC: 'Finally, every foundation brought the bear (kind) to this zoo.'
      without ACC: 'Finally, every foundation did bear-bringing/delivery to this zoo.'

In (59), the singular kind term *ayı* 'the bear' is a direct object argument to an object-level predicate at the event token domain if it is accusative case-marked. Then, it receives a representative object reading. When the singular kind term is non-case-marked, it participates in PI. Namely, it is introduced at the event kind domain and yields a sub-event kind of the bringing event kind, i.e. bear-bringing/delivery. The example given in (60) represents the interaction of this singular kind term with a universal quantifier in both configurations. Imagine a context where there are

a few foundations responsible for bringing animals to zoos. The PI-ed version is interpreted as distinct bear-bringing/delivery events for each foundation. This is possible because the sub-event kind undergoes ET, returning a set of event tokens instantiating it. Since the event token quantifier takes narrow scope with respect to the universal quantifier, the event kind quantifier and its singular kind argument receive a narrow scope interpretation, as well.

In contrast, the accusative case-marked version of (60) receives the implausible reading that each foundation brought the bear kind to the zoo. Since this is an object-level context, the singular kind term receives a representative object reading, and the group of bears (or a single bear) that represent the bear kind in this particular situation is considered as a definite singular object. This is because singular kind terms do not allow type-shifting that would return a set of entities instantiating the kind, given their impure atomicity. Since definites are scopally inert, the singular kind term cannot be interpreted under the scope of a universal quantifier, resulting in infelicity.[23]

This is reminiscent of the case that we have seen in Section 2.3.2: Singular kind terms are incompatible with distributive predicates such as *come from different regions*, as previously shown in (30) and repeated here in (61).

(61)   ***Ayı** bu hayvanat bahçesi-ne farklı   bölge-ler-den gel-di.
        bear this zoo-DAT   different region-PL-ABL come-PAST
        Intended: 'Bears came to this zoo from different regions.'

Again, the ungrammaticality of (61) follows from the impure atomic/group-like nature of singular kinds that are incompatible with instantiation. However, (61) can be made grammatical if the singular kind is PI-ed instead, as shown in (62).

(62)   Kurum   bu hayvanat bahçesi-ne farklı   bölge-ler-den **ayı** getir-di.
        foundation this zoo-DAT   different region-PL-ABL bear bring-PAST
        'The foundation did bear-delivery to this zoo from different regions.'

(62) is grammatical because *from different regions* modifies the event of bear-bringing/delivery, not the singular kind. Since when a (sub-)event kind undergoes ET, the result is a set of atomic event tokens and their pluralities, distributivity is possible. In other words, (62) refers to distinct events of bear-bringing/delivery each of which is done from different regions.[24]

To wrap up the discussion so far, my aim has been to show how bare singulars in the non-case marked direct object position are interpreted number neutrally. First, following Öztürk (2005), I have analyzed them as PI-ed objects. Then, I have argued that PI-ed bare singulars are singular kind terms that are thematic arguments introduced at the event kind domain, forming sub-event kinds. Although singular kind terms are grammatically atomic they remain true to the notion of kinds being conceptually plural, and their number neutral readings are inferred from this

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[23]The accusative case-marked version of (60) can describe a situation as follows: First, a group of bears considered to be representative of the bear kind is brought to the zoo, but for some reason it is returned back. Then, another foundation brings probably a different group of bears, but it is also returned. This process continues until each foundation happens to bring the bear kind to the zoo. It does not describe a situation where each foundation brings a different part of the same representative group.

[24]Subject PI would also be possible as the following: *Bu hayvanat bahçesine farklı bölgelerden ayı geldi.* 'Bear-coming happened to this zoo from different regions.' Subject PI is discussed in Section 3.1.5.

conceptual plurality. In the remainder of Section 3.1, I will discuss two more issues regarding PI: In Section 3.1.4, the inability of plural kinds to be PI-ed and in Section 3.1.5, subject PI.

3.1.4. Are plural kind terms pseudo-incorporated?

A question arising from the discussion above is whether Turkish bare plurals can also be PI-ed given that they are kind terms. Let us consider non-case-marked bare plural objects. They are awkward at best in the non-case-marked direct object position, and ungrammatical if they are intended to convey a sub-event kind reading, as in (63).

(63)   *Ali **kitap-lar** oku-du.
        Ali book-PL   read-PAST
        Intended: 'Ali did book-reading.'

This is reminiscent of what we saw with the thematic arguments of the verb 'invent' in Section 2.3.3. Therefore, it reveals more about the difference between singular and plural kind terms.

The reason bare plurals are not completely ruled out in this position is because they can function as a canonical argument occurring at the event token domain undergoing DKP, hence being interpreted as a narrow scope existential. However, this is only possible if plurality is emphasized in a contrastive way (e.g. *Ali kitap yazmadı, KİTAPLAR yazdı.* 'It is not the case that Ali did book-writing, Ali did BOOKS-writing.'), or in exaggeration contexts where abundance in number is emphasized.[25]

Presumably, a PI-ed singular kind term and a non-case-marked bare plural direct object with a narrow scope existential interpretation (occurring within event tokens and undergoing DKP) occupy the same syntactic position where case-marking is not available (complement position of the verb). In this case, there seems to be some kind of a competition between PI and DKP, where the usage of the latter is preferred when it is required for the reasons stated above.

When PI is not possible as in the case of modification at the level of ordinary objects, DKP of bare plurals is good in this position without contrastive or emphasis on plurality reading, as shown in (64). Recall that DKP draws on *pred* which turns bare plurals into sets of instantiations (i.e. ordinary objects) at the event token domain, contrasting with singular kind terms for which such kind of a strategy is not available.[26]

(64)   Ali *eski* **kitap-lar** oku-du.
        Ali old book-PL   read-PAST
        'Ali read old books.'

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[25]Also see Ketrez (2004) for the multiple events reading that is available in certain conditions, e.g. doing book-reading multiple times. Such readings are not always available and they add an exaggeration flavor.

[26]Mass kinds are compatible with PI although they are similar to plural kinds in nature, namely in allowing access to instantiations contrasting with singular kinds. However, as noted in fn 20, similar to verbs, mass nouns do not have a (morphological) singular/plural distinction that would differentiate group-like vs. sum-like kind reference, and in line with that, the atomicity/non-atomicity distinction is not observed in their kind denotations including taxonomic interpretations. Namely, there are no "singular impure atomic mass kinds" that would take the privilege, hence they are expected to occur in PI without the anomalies observed with plural kinds.

It should be noted that in case-marked subject and object positions, plurals are perfectly fine without these requirements both in their existential and definite interpretations, as is clear in the examples given previously. These are the cases where PI, ie. sub-event kind formation, is not relevant and possible. More precisely, the usage of bare plurals undergoing DKP is weird in the non-case-marked direct object position where PI is always an option.

This competition might be arising due to various reasons. It could be explained in an Optimality-theoretic framework, where PI is ranked over DKP. Alternatively, it could be a result of Last Resort, a principle of Economy (Chomsky 1995), which allows the application of an operation, in our case DKP, if the derivation would otherwise result in an ungrammatical representation. In Section 3.3, we will also see that another construction involving singular kinds competes with bare plurals type-shifted by *pred* in the predicate position. Therefore, the reason behind it seems to be related more to the privileged status of kinds over instantiations. However, what matters for the present purposes is the existence of such a competition between the two.

The fact that bare plurals occurring in the non-case-marked direct object position behave like PI-ed bare singulars syntactically does not mean that they are PI-ed. In other words, immediately preceding the verb and not receiving case as direct objects is not only for PI.

A good way of supporting this idea would be to find contrasts between PI of singular kinds and DKP of plural kinds, especially in terms of the hallmarks of PI, number neutrality and obligatory narrow scope. Unfortunately, the narrow scope property does not differentiate between the two phenomena since it is ensured for bare plurals by DKP anyway. Number neutrality might be considered as a distinctive property given the following facts, though. We have already seen in Section 2.2 that bare plurals in Turkish have a number neutral interpretation but they receive a multiplicity reading in positive contexts due to conversational implicature. So, (64) has a strict plural reading. On the other hand, a number neutral interpretation is always inferred from a PI-ed bare singular and it is not affected by conversational implicature. This disparity shows that DKP and PI are distinct phenomena.[27]

One other contrast shows up in a more Turkish specific case: the occurrence of PI with non-derived adverbs in Turkish. Taylan (1984) shows that non-derived adverbs, i.e. adjectives that act like an adverb, always have to occupy an immediate pre-verbal position and cannot precede a case-marked argument, as shown in (65a). However, in the case of PI, they have to precede the PI-ed bare singular, as shown in (65b) (Öztürk 2005, Aydemir 2004, and Kamali 2015).

(65)   a. *Ali *yavaş* **kitab-ı** oku-du.
            Ali slow book-ACC read-PAST
            'Ali read the book slowly.'
    b. Ali *yavaş* **kitap** oku-du.
            Ali good book read-PAST
            'Ali did book reading slowly.'

Non-case-marked bare plurals, though, pattern with canonical arguments in that they cannot be preceded by non-derived adverbs, as shown in (66). Instead, as exemplified in (67), these

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[27]One other distinctive property would be the ability of non-case-marked bare plural objects to introduce discourse referents as opposed to the PI-ed bare singulars for which this is a trickier issue (see Aydemir 2004 and Kamali 2015). However, as mentioned in fn 21, the (non-)referentiality is kept out of the scope of this paper.

modifiers modify the noun rather than the verb when they precede a bare plural (Aydemir 2004). Notice that if (67) has a bare singular instead, *güzel* 'nice' still acts as a non-derived adverb. If the modifier is intended to be used as an adjective, it requires the indefinite form, since it is an ordinary object level modifier. As we have seen above, this kind of modification is incompatible with PI-ed bare singulars.

(66)   *Ali *yavaş* **(eski) kitap-lar** oku-du.
       Ali slow old   book-PL read-PAST
       'Ali read (old) books slowly.'

(67)   Ali *güzel* **kitap(-lar)** oku-du.
       Ali nice book-PL   read-PAST
       with PL: 'Ali read nice books.'
       without PL: 'Ali did book-reading nicely .'

Regardless of how we analyze non-derived adverbs, it seems that in the case of PI they modify the event after the sub-event kind is formed and before any other canonical arguments are introduced. I believe that it would not be implausible if they were considered to be modifiers introduced at the event kind domain, restricting the sub-event kind denotation. Based on this approach, the book-reading event kind modified by the adverb *yavaş* 'slowly' in (65b) is a sub-event kind of the book-reading event kind: slow book-reading (cf. with fast book-reading). Since this kind of modification happens at the event kind domain it is expected to occur before the event kind undergoes ET, hence before canonical arguments are introduced. This might explain why non-derived adverbs cannot precede canonical arguments. Given that they cannot precede bare plurals, either, it is reasonable to conclude that non-case-marked bare plurals are not PI-ed. Instead, they are canonical arguments introduced at the event token domain.

Besides bare plurals, numeral constructions and indefinites formed with the numeral *bir* 'one' (weak indefinites) can also occur without receiving an overt case-marking, further supporting the idea that non-case-marked direct object position is not only dedicated to PI. In this position, they are interpreted as non-specific, as opposed to specific indefinites with *bazı* 'some', universal quantifiers, pronouns, proper names, and definites, which always have to receive case. Kamali (2015) compares non-case-marked indefinite objects with PI and argues that the former cannot be analyzed as an instance of the latter (cf. Öztürk 2005). Her claim is based on the fact that non-case-marked indefinite objects do not convey a number neutral interpretation and it is still possible to find cases where they yield wide scope readings. Aydemir (2004) also distinguishes them from PI showing that non-derived adverbs cannot precede non-case-marked indefinite objects as opposed to PI-ed bare singulars, and that while the latter supports an atelic interpretation, the former is compatible with telicity.[28]

Obviously, being a non-case-marked argument is the reflection of a more general phenomenon and PI of bare singulars is just an instance of it, which definitely is a topic of a separate project, as stated above.[29]

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[28]Kamali (2015) observes that there are cases where the opposite of this generalization holds depending on the lexical aspectual properties of the verbs. The interaction of aspect and PI will not be addressed in this paper.

[29]This caseless direct object argument position can only be occupied by the elements that have the capacity to be interpreted as non-specific as mentioned above. Specific and definite direct objects receive accusative case marking in episodic contexts (Enç 1991), but non-specificity can still be achieved with other case markers, namely ones of indirect objects and the nominative case. Bare plurals are interpreted as definites when accusative case-marked and

3.1.5. Subject pseudo-incorporation

I have argued that bare singulars in argument positions, as opposed to those in the non-case-marked direct object position, are singular definites. I have also argued that bare plurals do not lend themselves to PI. A striking confirmation of these claims comes from examples such as (68) that may at first seem to pose a challenge for the position I have staked out:

(68) Ali-yi **arı** sok-tu.
      Ali-ACC bee sting-PAST
      'Ali got bee-stung.' (one or more bees)

Although PI usually targets direct objects, it has been noted in the literature that PI of subjects is possible under certain conditions. Farkas and De Swart (2003), for example, discuss subject PI in Hungarian, and Öztürk (2005) specifically argues for this for (68).[30] She provides two pieces of arguments, which I elaborate on within the terms of the present analysis. The first argument comes from the contrast with (69) (Öztürk 2005: pg. 42). As noted earlier, adjacency between the bare singular and the verb is needed for PI. When that is not in evidence, the bare singular undergoes the *iota* type-shift to yield a singular definite subject.

(69) **Arı** Ali-yi sok-tu.
      bee Ali-ACC sting-PAST
      'The bee stung Ali.'

The second piece of argument comes from the case-assignment facts. In Öztürk (2005), canonical subjects are claimed to bear the null nominative case marker, being introduced in a case position (e.g. AgentP, ThemeP if unaccusative, etc.), whereas PI-ed subjects are claimed to be introduced by the verb, which is not a case assigning position. The difference in case is visible in embedded nominalized clauses in which canonical subjects receive the genitive case marking, as in (70a), whereas PI-ed subjects remain non-case-marked, as in (73) (Johanson 1977, Kornfilt 1984, 1997, 2009, von Heusinger and Kornfilt 2005).

(70) a. **Arı*(-nın)** Ali-yi sok-tuğ-un-u   bil-iyor-um.
          bee-GEN   Ali-ACC sting-NOMINAL-3SGPOSS-ACC know-PROG-1SG
          'I know that the bee stung Ali.' (canonical subject)
      b. Ali-yi **arı(-nın)** sok-tuğ-un-u   bil-iyor-um.
          Ali-ACC bee-GEN sting-NOMINAL-3SGPOSS-ACC know-PROG-1SG
          without GEN: 'I know that Ali got bee-stung.' (PI)
          with GEN: 'I know that the bee stung Ali.' (canonical subject)

To Öztürk's arguments about subject PI, I add the following further piece of support. Recall that PI-ed bare singulars do not take object-level modifications that give temporal or accidental properties of individuals but take taxonomic-level modifications, leading to sub-kind level interpretations. In the case of (68), it is possible to have European-bee stinging, but not broken-

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as narrow scope existentials when non-case-marked. If they receive case marking other than accusative, then they get both readings. However, the accusative case does not necessitate specificity/definiteness in generic contexts.

[30]In Turkish, all types of nouns, i.e. animate or inanimate, are perfect candidates for PI with unaccusative verbs. With transitive and unergative verbs human denoting bare singulars can only be PI-ed in evidential contexts, where the identity of the subject is less important, e.g. *Bu resmi çocuk çizmiş.* 'Apparently, this picture was child-drawn.'

wing bee stinging, as shown in (71). (The adjective *siyah* 'black' in (71b) defines the European honey bee.)

(71) a. *Ali-yi *kırık kanat-lı* **arı** sok-tu.
          Ali-ACC broken wing-with bee sting-PAST
          Intended: 'Ali got broken-wing bee stung.'
          Good: 'The bee with broken wings (focused) stung Ali.'
      b. Ali-yi *siyah* **arı** sok-tu.
          Ali-ACC black bee sting-PAST
          'Ali got European bee-stung.'

So, based on the argumentation sketched above, I argue that subjects as in (68) also fall into the same analysis proposed for the object PI. In other words, PI-ed subjects are also singular kinds introduced at the event kind domain to yield sub-event kinds. In (68), Ali is involved in an event kind of stinging with the bee kind as its agent, and the number neutral reading is achieved as an inference. The logical form of the sentence in (68) is represented below.

(72) $[\![Ali\text{-}ACC \text{ } bee \text{ } stung]\!] = \exists e \text{ } \exists e^k \text{ } [R(e, e^k) \wedge sting(e^k) \wedge Ag(e^k) = \iota X \text{ } [BEE(X)] \\ \wedge Th(e) = Ali]$

Recall that PI-ed bare singulars obligatorily take scope under other quanitifers. Accordingly, if (68) is negated, we get the expected $\neg > \exists$ reading: Ali did not get bee-stung (no bees). As in the case of object PI, this seemingly narrow scope behavior follows from the argumentation of the singular kind at the event kind domain.

Recall further that PI in Turkish does not apply to bare plurals. As predicted, the plural version of (68) with *arı-lar* is unacceptable with the intended PI meaning of bee-stinging. It can only occur as a nominative case-marked canonical argument that receives a narrow scope existential reading via DKP or a definite reading by type-shifting via *iota* in episodic contexts.[31] The fact that they are not PI-ed is evidenced by their obligation to receive the genitive case in nominalized clauses as opposed to PI-ed bare singulars, as shown below.

(73) Ali-yi **arı-lar*(-ın)** sok-tuğ-un-u   bil-iyor-um.
      Ali-ACC bee-PL-GEN sting-NOMINAL-3SGPOSS-ACC know-PROG-1SG
      'I know that bees/the bees stung Ali.' (canonical subject)

To conclude the whole discussion on PI, the apparent number neutrality of PI-ed bare singulars, both as objects and subjects, is due to their singular kind denotations. In the following section, I will explain the number neutrality of bare singulars in the existential copular construction.

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[31]DKP of a bare plural subject does not compete with PI, since the competition only happens when they occupy the same syntactic position, which is only possible in the non-case-marked direct object position. So, bare plural subjects are still good in the immediate preverbal position without the restrictions observed in the case of their object counterparts discussed previously.

3.2. The Existential Copular Construction

I now turn to the existential copular construction, which is another instance where bare singulars are interpreted number neutrally. The relevant example given in (38b) is repeated below.

(74) İçeride **fare** var.
      inside mouse exist
      'There is a mouse/are mice inside.'

Such sentences instantiate the existential copular construction where a locative phrase is followed by a pivot, which in turn is followed by the existential copula *var*. In our case the pivot is a bare singular, but bare plurals, indefinites, numeral constructions, nouns with universal quantifiers, definites, demonstratives, pronouns, and proper names can also be pivots, as shown in (75). This shows that Turkish existential clauses are unrestricted in that respect and they do not show a definiteness effect (cf. Kelepir 2001).[32]

(75) a. İçeride **fareler/bir fare/iki fare** var.
          'There are mice/is a mouse/are two mice inside.
      b. İçeride **her fare/fare/fareler/o fare/o/Mickey Mouse** var.
          Lit.: 'There is every mouse/the mouse/the mice/that mouse/he/Mickey Mouse
          inside.'

There is a strict word order relation between the locative phrase and the pivot in these structures evidenced by the fact that the sentence becomes ungrammatical if the pivot is left-dislocated (Taylan 1984). However, as is the case with PI-ed bare singulars, separation of the pivot from the existential copula can be successful for discourse-related reasons such as contrastive topicalization.

The semantics of existential clauses has been well studied cross-linguistically, and various theories have been put forward regarding their interpretation (Milsark 1974, Barwise and Cooper 1981, Keenan 1987, Landman 2004, McNally 1992, Francez 2007, among others). Among them, Milsark (1974) proposes that the existential predicate contributes an existential quantifier and the pivot serves as its restrictor denoting a property. Under this analysis, we would expect bare singulars in the existential copular construction to denote properties, and the construction to yield the definiteness effect. As stated above, the definiteness effect does not hold for Turkish and the pivot seems to be unrestricted. As for bare singulars, it would be misleading to treat them as properties in this construction for two reasons as is the case with PI.

First, we get a number neutral interpretation from them although their property denotation has been previously shown to be atomic. Second, bare singulars in this construction cannot be modified at the ordinary object level, as shown in (76a), requiring the indefinite or plural forms, just as PI-ed bare singulars.[33] This type of modification is only possible if they are interpreted

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[32]A reviewer points out that in the case of the "unexpected" pivots, the construction is not interpreted as a genuine existential, but receives other meanings like possessive 'have', which is taken as an argument against the lack of the definiteness effect. However, the possessive reading arises when the locative phrase expresses an animate object such as a human, and it applies to all pivots, not just to the unexpected ones. Additionally, this is expected since the interpretation that is dedicated to the existential copula should be understood as being present at a location, as will be discussed below. This also includes possessive readings: being present at one's possession.

[33]I am assuming that *old* is not interpreted with a taxonomic meaning, i.e. ancient kind of books. The facts

as singular definites, as represented in (76a). However, modification operating at the taxonomic domain does not obligate a definite interpretation, as shown in (76b). These facts would not be expected if bare singulars denoted properties in the existential construction.

(76) a. Kutu-da *eski* **kitap** var.
this box-LOC old book exist
'This box has the old book.'
Not: 'There is an old book/are old books in this box.'

b. Kutu-da *dini* **kitap** var.
this box-LOC religious book exist
'This box has the religious book.'
'There is a religious book/are religious books in this box.'

Therefore, I conclude that bare singulars in the existential copular construction occur as singular kind terms and if they occur with their property denotation, *iota* has to apply to them to yield a definite interpretation. So, they cannot serve as the property denoting restrictor to the existential quantifier supposedly introduced by the existential copula.

I claim that in the existential clauses of Turkish, the existential copula denotes a property of existing/being present and the pivot is a subject bearing the theme role on a par with unaccusative constructions. This explains the unrestricted nature of the pivot and the lack of the definiteness effect as opposed to languages like English. The locative phrase, on the other hand, is an argument that specifies the contextually salient location or time of existence/presence.

Similar to the case discussed in the previous section, all the pivots except for the pivot occurring as a singular kind term receive the null nominative case marker, and this difference becomes visible in nominalized embedded clauses, as shown below.[34] Below the pivot occurring as a canonical subject is as a proper name, but the fact holds for other types of pivots, as well.

(77) a. Bu oda-da **Ali*(-nin)** ol-duğ-un-u bil-iyor-um.
this room-LOC Ali-GEN be-NOMINAL-3SGPOSS-ACC know-PROG-1SG
Lit.: 'I know that there is Ali in this room.' (canonical pivot)

b. Bu oda-da **fare(-nin)** ol-duğ-un-u bil-iyor-um.
this room-LOC mouse-GEN be-NOMINAL-3SGPOSS-ACC know-PROG-1SG
without GEN: 'I know that there is a mouse/are mice in this room.' (singular kind)
with GEN: 'I know that this room has the mouse.' (singular definite)

It is worth noting that the existential copular construction requires a strict word order relation between the pivot and the copula for some reason that is not clear to me at this point, which is not the case with unaccusative constructions. We could assume that just like non-case-marked direct objects, i.e. PI-ed objects, non-specific indefinites, and narrow scope existential plurals, all pivots are introduced by the verb, instead of being introduced by higher case assigning heads (Theme head for unaccusatives in Öztürk 2005). This would explain the strict unity between the pivots and the existential copula because the elements introduced by the verb are more restricted in terms of the degree of syntactic freedom. However, this would leave the facts

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regarding generic contexts discussed in Section 3.1.1 and contrastive focus mentioned in fn 14 hold for the existential copular construction, as well.

[34]Existential copula *var* is realized as the copula *ol-* in embedded structures (Göksel 2003 and Kelepir 2003).

of case shown above unexplained because VP internal arguments, both objects and subjects, as shown during the analysis of PI, do not receive case (cf. Kelepir 2001). In our case, it is syntactically evident that all pivots except for singular kinds receive the null nominative case.[35]

However, what matters for our purposes is the distinction between a bare singular pivot occurring as a singular kind term and all other pivots in terms of case-assignment, which aligns with the facts of subject PI. Based on this, I claim that when a singular kind term is the pivot, differently from the other pivots, subject PI occurs. In other words, singular kinds are introduced at the event kind domain specifying a sub-kind of the existence event kind. In light of this, the logical representation of (74) is given below.[36]

(78) $[\![inside\ mouse\ exist]\!] = \exists e\ \exists e^k\ [R(e, e^k) \wedge exist(e^k) \wedge Th(e^k) = \iota X\ [MOUSE(X)]$
          $\wedge\ Loc(e) = inside]$

The event kind formed via the combination of the singular mouse kind and the existence predicate will correspond to at least one event token with one or more mice existing in a contextually salient location. This results in a number neutral interpretation, and it is inferred due to the conceptual plurality of the singular kind rather than some type-shifting mechanism.

With this analysis at hand, we expect bare singulars in the existential copular construction to be interpreted under the scope of other quantificational elements due to their local relation to the event variable as opposed to the other pivots.[37] For example, in (79a), the event quantification takes narrow scope with respect to the universal quantification, which also results for a seemingly narrow scope interpretation for the singular kind term.

(79)   a.   Ev-in   her   yer-in-de   **fare**   var.
               house-GEN every place-3SGPOSS-LOC mouse exist
               'Everywhere in the house there is a mouse/are mice.'
         b. $\forall y\ [place.of.house(y) \rightarrow \exists e\ \exists e^k\ [R(e, e^k) \wedge exist(e^k)$
               $\wedge\ Th(e^k) = \iota X\ [MOUSE(X)] \wedge Loc(e) = y]]$

If the singular kind term was not PI-ed, it would be scopally inert like definites, demonstratives, and proper names given that singular kind terms are also definites built with *iota*. In that case, it would receive the singular representative object interpretation since (79a) is an object-level predication in an episodic context. Hence, we would get the implausible reading 'The mouse (as representative of the mouse kind) is such that it exists everywhere in the house.'[38]

To wrap up, bare singulars in the existential copular construction are singular kind terms undergoing subject PI, and the neutrality in number is an inference resulting from their conceptual association with instantiations.

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[35]In addition, a non-case-marked indefinite object (e.g. *bir kitap* 'a book') is limited in its scope properties taking narrow scope as opposed to a case-receiving indefinite. However, an indefinite pivot is free in its scope properties showing that pivots align with case-marked arguments.

[36]Espinal and McNally (2011) treat bare singulars occurring in existential clauses of Spanish and Catalan as PI.

[37]All the pivots except for bare plurals having existential interpretations are free in their scope abilities. However, bare plurals take narrow scope due to DKP.

[38]Note that 'The mouse (as a kind) exists everywhere' in its global interpretation is good both in English and Turkish because this is a kind-level predication where the singular kind term refers to the totality of the mouse kind directly, not as a representative object, and this totality is widespread everywhere.

3.3. The Predicate Position

Finally, I will discuss the number neutrality of bare singulars in the predicate position. Analogous to the analysis of PI, I claim that bare singulars in the predicate position can have singular kind reference and that the apparent neutrality follows from that.

In Turkish, if the subject is singular, either a bare singular or an indefinite appears in the predicate position, but if the subject is plural, a bare singular can still appear in the predicate position as opposed to an indefinite.[39]

(80)   a.   Ali (bir) **çocuk**.
           Ali a   child
           'Ali is a child.'
       b.   Ali ve   Merve (*bir) **çocuk**.
           Ali and Merve a   child
           'Ali and Merve are children.'

Given our claim that bare singulars in Turkish denote atomic properties, the fact that they can be predicated of plural subjects is a problem. Instead, it suggests that bare singulars should have number neutral set denotations. However, a closer investigation reveals the opposite.

When bare singulars in the predicate position are modified, they are only compatible with singular subjects, losing their ability to be predicated of plural subjects, as shown in (81). Interestingly, though, if the adjectival modifier is understood as establishing a sub-kind/type of the noun that it modifies then the predication is compatible with plural subjects as well as singular ones, as shown in (82).

(81)   a.   Ali yakışıklı **doktor**.
           Ali handsome doctor
           'Ali is a handsome doctor.'
       b.   *Ali ve   Mehmet yakışıklı **doktor**.
           Ali and Mehmet handsome doctor
           'Ali and Mehmet are handsome doctors.'

(82)   a.   Ali pratisyen   **doktor**.
           Ali practitioner doctor
           'Ali is a practitioner doctor.'
       b.   Ali ve   Mehmet pratisyen   **doktor**.
           Ali and Mehmet practitioner doctor
           'Ali and Mehmet are practitioner doctors.'

The former case can be explained by the claim that bare singulars denote atomic properties, and they can be modified at the ordinary object level. Additionally, since they are atomic properties, they can only be predicated of singular subjects.[40] On the other hand, the latter case reminds us

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[39](80a) is found weird without accompanying adverbial elements like *hala/henüz* 'still'.

[40]Bare singulars in the predicate position resist modification by complex structures like relative clauses and postpositional phrases, either being interpreted as definite or requiring the indefinite form. This paper does not offer an explanation for this restriction. The main purpose is to show that modification of bare singulars when available yield interesting predictions regarding the number interpretation.

of the modification facts of PI. In parallel with this, the contrast given above can be attributed to the view that bare singulars can also appear as singular kind terms in the predicate position, being only compatible with taxonomic modification.[41]

The next question is how the predication occurs when bare singulars in the predicate position are singular kind terms, but not property denoting elements. To recall, any type-shifting operation that would take a singular kind and return its instantiation set is not available (*pred* or *R*), making predication impossible in this way. Instead, I propose that the usage of singular kind terms in the predicate position is a way of naming a kind that the referent of the subject term belongs to. This is achieved by the copula that plays a role of a null operator associating the two.[42] The motivation behind this claim is that singular kind terms are names of kinds, as discussed in Section 2.3.3.

The denotation that the copula has in such structures is given in (83a) (*k* represents kinds, *K* represents singular kind terms, and *R* is Realization relation). The copula takes a singular kind term and puts it in a naming relation, i.e. *NAME*, with the kind the referent of the subject term is a member of. Following Krifka et al. (1995), singular kind terms function as proper names being definite expressions that refer to kinds. The *NAME* relation then equates/identifies the referent of the singular kind term with the kind that the referent of the subject term realizes. So, the logical form of the sentence *Ali çocuk* 'Ali is child' is shown in (83b). Informally, (83b) can be stated as the following: There is a kind that Ali is a member of, and that kind is the same as the one that the singular kind term names, i.e. $\iota X\ [CHILD(X)]$, the child kind.

(83)   a. $[\![COP]\!] = \lambda x^K\ \lambda y\ \exists k\ [R(y,k) \wedge NAME\ (k, x^K)]$
        b. $[\![Ali\ is\ child]\!] = \exists k\ [R(Ali,k) \wedge NAME\ (k, \iota X\ [CHILD(X)])]$

Kind-naming specification can also be achieved if the subject is a plural term considering that sum individuals are also members of kinds. This explains the compatibility of bare singulars with plural subjects in the predicate position. The logical form of (80b) is given below, which can be informally stated as the following: There is a kind that the plural individual Ali $\oplus$ Merve is a member of, and that kind is the same as the one that the singular kind term names, i.e. $\iota X\ [CHILD(X)]$, the child kind.

(84) $[\![Ali\ and\ Merve\ are\ child]\!] = \exists k\ [R(Ali \oplus Merve,k) \wedge NAME\ (k, \iota X\ [CHILD(X)])]$

One could argue that the ability of a bare singular to occur with a plural subject is due to a null Distributive operator that takes an atomic property denoted by a bare singular and distributes it over the atomic parts of a plural subject. However, a solution of this kind cannot be adopted since in that case, bare singulars modified at the ordinary object level would also be predicated of plural subjects. This is not the case, as shown in (81b).

So, bare singulars in Turkish can occur in the predicate position of plural subjects due to kind-naming specification, not the alleged number neutral denotation that they have.

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[41]Bare singulars in the predicate position can also be found in Romance and Germanic languages like Dutch, French, Spanish, and German, although their usage is more restricted compared to the ones in Turkish. See de Swart et al. (2007) for an account of them which is in similar lines with the analysis given here.

[42]It has been claimed that there is a null copula in the predicate position, and it is the present tense realization of the copula *-i*, which is overtly realized with other tenses (Kornfilt 1996, Kelepir 2003).

Before moving on to the next section, I will show that just as in PI, the kind-naming specification also reveals the difference between singular and plural kind terms. Bare plurals cannot participate in kind-naming specification since plural kind terms do not function as names of kinds in Turkish, as discussed in Section 2.3.3. The only way for them to appear in the predicate position is either to occur as properties, undergoing type-shifting via *pred*, or as definites, undergoing further type-shifting via *iota*. However, the first option does not seem to apply as evidenced by (85) which means 'Ali and Mehmet are the doctors.', not 'Ali and Mehmet are doctors.', receiving an equative interpretation.[43]

(85)   Ali ve   Mehmet **doktor-lar**.
        Ali and Mehmet doctor-PL
        'Ali and Mehmet are the doctors.'

Does this mean that bare plurals can only be definites in the predicate position? The answer is no, since they can receive a predicative interpretation besides the definite one if they are modified, as shown in (86).

(86)   Ali ve   Mehmet yakışıklı   **doktor-lar**.
        Ali and Mehmet handsome doctor-PL
        'Ali and Mehmet are (the) handsome doctors.'

However, for bare plurals to appear as properties in the predicate position, the modification that they receive should be operating at the ordinary object level. If it is a taxonomic modification, as in (87), the bare plural receives an equative reading, as in (85).[44]

(87)   Ali ve   Mehmet pratisyen   **doktor-lar**.
        Ali and Mehmet practitioner doctor-PL
        'Ali and Mehmet are the practitioner doctors.'

What prevents bare plurals from having property denotations if they are not modified at the ordinary object level? Notice that ordinary object-level modification is exactly the case that a singular kind term is not capable of. In other words, bare plurals are only allowed to occur as properties in the predicate position, undergoing type-shifting via *pred*, when singular kind terms cannot occur at all. They are resorted to only in case of a need. This is reminiscent of the competition between plural kind terms undergoing DKP and PI-ed singular kind terms which is discussed in Section 3.1.4. The occurrence of bare plurals as definites in the predicate position, however, is freely available since they are the only means for plural definite interpretations. Therefore, no competition arises.

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[43]Here, I assume that the stress falls on the plural marker. It is also possible that the syllable before *-lAr* is stressed instead, in which case *-lAr* is the optional 3rd person plural agreement marker that appears on the bare singular (Göksel and Kerslake 2005). The stress pattern follows from the fact that the null copula, the present tense realization of the copula *-i*, is between the noun and the person agreement marker. Being a clitic, the copula shifts the stress to the preceding syllable (e.g. Kornfilt 1996, Kelepir 2003). See fn 42.

[44]As pointed out in fn 4, Bale et al.'s 2010 claim of bare plurals to be exclusive of atoms is based on the fact that they cannot be predicated of singular subjects. Note that this is a result of a competition with singular forms due to Maximize Presupposition (Heim 1991): When bare plurals are definites, the equative reading requires a maximal unique individual to be equated with the definite plural, but a singular subject is an atomic individual. This is achieved by a competition with the singular definite denoted by the singular form. Similarly, when bare plurals are predicates, they compete with atomic predicates (bare singulars and singular indefinites).

The fact that the ability of bare plurals to appear as properties in the predicate position depends on their competition with singular kind terms leads to the conclusion that the property denotations of bare plurals are always derived from their kind reference. Namely, if they were ambiguous in also denoting properties independent of their kind denotations as argued for English bare plurals, we would not expect such a competition in the predicate position. Instead, we would expect bare plurals to occur freely in these positions as properties regardless of the singular kind alternative, since it is not clear why a singular kind term would block a plural property underived from a plural kind term. Accordingly, the predicative usage of an indefinite form as in (80a) is not blocked by the singular kind term, therefore it stays as an alternative usage even when the kind-naming specification is still available.

The question is why there is a competition between instantiation of plural kinds and kind naming specification after all. The same holds for the case of PI as briefly mention in Section 3.1.4: Why does PI compete with DKP? In both cases, the two opponents compete for the same syntactic position. In the former case, the competition occurs in the predicate position, that is the complement position of the copula. In the latter case, it occurs in the non-case-marked direct object position, that is the complement position of the verb. Although the reason why such a competition exists is obscure at this point, it is unsurprising to see that instantiation of plural kinds is under-privileged with respect to kind naming specification and PI. The common outcome of both constructions is kinds: In PI, it is a sub-event kind, and bare singulars participating in it also refer to kinds. Similarly, kind naming specification serves the aim of naming a kind. From an intuitive point of view, kinds have ontologically a prior status compared to ordinary individuals, i.e. instantiation of kinds. Therefore, it is not unpredictable that they take the privilege over instantiation operations when a competition takes place between the two.

4. Consequences for Numeral Semantics

There remains one notable fact about Turkish that the view of bare singulars adopted here has direct bearing on, which needs to be addressed before concluding. Numerals in Turkish are incompatible with bare plurals as opposed to languages like English, as shown below.

(88)   iki kitap(*-lar)
         two book-PL
         'two books'

On one view of the semantics of numerals, where numerals are treated as restrictive modifiers in the sense of Link (1987), this would be an argument for the number neutral analysis of bare singulars (see also Partee 1987, Link 1983, Link 1987, Landman 1989, among others). Indeed, Bale et al. (2010) propose precisely that.

However, there is an alternative view of numeral constructions where English plural nouns are the derivative and Turkish singular nouns are the core. Ionin and Matushansky (2006) argue that English *-s* in numeral constructions is number agreement (also called semantic concord) rather than a genuine plural marker. They claim that true plurals cannot combine with numerals because only individuals of the same cardinality can be counted. A plural noun such as *books* denotes a set of individuals *x*, where each *x* is a plurality of books, and these pluralities do not necessarily have the same cardinality. In other words, *books* in *two books* has to be semantically singular, only denoting a set of atomic individuals. On the other hand, languages like Turkish

lack this number agreement in their numeral constructions (cf. Scontras 2014 and Martí 2017). So, in their view, numerals are modifiers of type $\langle\langle e,t\rangle,\langle e,t\rangle\rangle$ the lexical complement of which has to be atomic. Their illustration is given in (89) (Ionin and Matushansky 2006: pg. 321). Informally, ⟦*two books*⟧ is stated as in (90).

(89)   a.   ⟦*two*⟧ $= \lambda P \lambda x \exists S [\prod (S)(x) \wedge |S| = 2 \wedge \forall s \in S \, P(s)]$
       b. $\prod (S)(x) = 1$ iff
            S is a cover of x, and
            $\forall z, y \in S \, [z = y \vee \neg \exists a \, [a \leq_i z \wedge a \leq_i y]]$
       c.   A set of individuals C is a cover of a plural individual X iff X is the sum of all members of C: $\sqcup C = X$

(90) $\lambda x \in D_e. \ x$ is a plural individual divisible into 2 non-overlapping individuals p_i such that their sum is x and each p_i is a book.

It is worth pointing out that Ionin and Matushansky's view of numerals is motivated on independent grounds. As they show, complex numeral constructions like *two hundred books* can only be given a compositional account if counting takes atomic properties. Treating numerals as predicates faces the problem that the predicate modification would result in incorrect truth-conditions. Namely, the NP *two hundred books* would denote the empty set since for no x it is the case that the set of atoms is equal to both two and hundred simultaneously.

The same holds for Turkish, as well. Thus, I argue, contra Bale et al. (2010), that not only are counting constructions amenable to an account of Turkish bare singulars as atomic properties, they are further evidence for it.[45]

5. Conclusion

This paper has explored the semantics of bare singulars in Turkish, which are unmarked for number, but receive both singular and in certain constructions number neutral interpretations. With an aim to address this challenge, I have followed an approach where they are taken to be fundamentally singular terms as unmarked nouns of English, showing that singularity is not only a way of naming their morphologically unmarked status, but also a semantic property of them. In doing so, I have taken as basis their singular interpretation in case-marked argument positions and their singular kind reference. This contrasts with the previous accounts where bare singulars in Turkish are argued to denote number neutral sets, inclusive of atoms and pluralities (Bliss 2004, Bale et al. 2010, and Görgülü 2012).

I have proposed that the perceived number neutrality of bare singulars in certain constructions like the non-case-marked argument position, the existential copular construction, and the predicate position follows from their singular kind reference. The first two are analyzed as instances of the phenomenon called pseudo-incorporation, which is argued to be a process of sub-event kind formation with singular kind arguments introduced at the event kind domain. We have seen that singular kinds are grammatically impure atomic but conceptually plural entities, contrasting with plural kinds (Dayal 2004). So, the number neutrality in pseudo-incorporation is achieved as an inference due to this conceptual plurality rather than some type-shifting mecha-

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[45]In Turkish *çok* 'many/a lot of' and *bir kaç* 'a few' also combine with bare singulars rather than plurals. I suggest that they can also be considered to presuppose atomicity like numerals.

nism. The third one, on the other hand, is analyzed as kind-naming specification where a kind that the referent of a singular or plural subject term belongs to is named by a singular kind term.

I have also shown that bare plurals of Turkish are like English bare plurals in having a number neutral set denotation, but during the analysis we have seen several respects in which bare plurals of the two languages differ from each other. Nevertheless, the core idea of this study is that the correlation between morphological and semantic (un-)markedness is manifested asymmetrically in Turkish aligning with the case in English. Finally, I have discussed the consequences of my study for the semantics of numerals which lend themselves better to Ionin and Matushansky's (2006) view where they are treated as functions combining with atomic properties.

Ultimately, the present view can shed light on other languages where singular forms sometimes behave like singular terms and sometimes like plural terms, despite the presence of a morphological singular/plural distinction. Western Armenian (e.g. Bale et al. 2010, 2014), Persian (e.g. Modarresi 2014), and Hungarian (e.g. Farkas and De Swart 2003) can be taken as examples for this typology and are worth considering under the approach pursued here.

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