Number marking, blocking effects, and Turkish noun phrases

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1. Introduction

Broad aim:

Discuss number neutrality, singularity, and plurality in the Turkish nominal domain with a focus on the syntactically low, non-case-marked NPs, which have been analyzed as pseudo-incorporated structures in the literature (Öztürk 2004; 2005; et seq.)

Specific aims:

• Question the hypothesis that Turkish has only a distinction between general number and strict plurality (contra Bale et al. in press)

• Show that:
  o Noun roots (and therefore a set of non-PL-marked NPs) are number neutral
  o The language may have another domain of distinction that comes from strict singularity

• Motivate a syntax and semantics in accounting for the distinctions between:
  o Strict singularity and strict plurality
  o Number neutrality and strict plurality
  o Number neutrality and strict singularity

• Explain the absence and presence of various competition effects among these based on structural complexity in the vein of Katzir (2008) and Bale et. al (in press)

• Claim that not only NPs but also NumPs can undergo pseudo-incorporation in Turkish
2. Turkish, number neutrality and pseudo-incorporated NPs

2.1 Strict singularity versus general number

In some languages (e.g. English, as a standard example) the contrast between *singularity* and *plurality* is a distinction between *singularity* versus *general number* (Corbett 2000). This can be attributed to the hypothesis that the plural is unspecified for number (Krifka 1989, 1992, 1999; Sauerland 2003; Sauerland et al. 2005; i.a.):

(1) \[
\text{[[ student ]] } = \{ x, y, z \} \\
\text{[[ students ]] } = \{ x, y, z, x+y, y+z, x+z, x+y+z \}
\]

It has also been maintained in the literature that the strict singular interpretation arises from its competition with the plural via:

(i) Maximize Presupposition (Sauerland 2003; Sauerland et al. 2005 based on Heim 1992’s proposal)
(ii) Scalar interpretation (Krifka 1989, 1992, 1999; i.a.)

Since singular in English denotes strict singularity; it requires plural marking when numerals meaning *greater than one* combine with nouns. These numerals require NPs with non-singular denotations:

(2) a. Two students  
   b. *Two student

(3) a. John and Mary are students.  
   b. *John and Mary are (a) student.

2.2 Turkish nouns are number neutral

There are languages such as Turkish in which non-PL-marked nouns do not denote strict singularity but rather general number, and where plurality denotes strict plurality. (See Bale et al. *in press* who adopt the number neutrality analysis for Turkish nouns as well; based on a subset of the data and the points presented here.)

(4) *Singular = general number*

\[
\text{[[ öğrenci ]] } = \{ x, y, z, x+y, x+z, y+z, x+y+z \}
\]

\[
\text{[[ öğrenci-ler ]] } = \{ x+y, x+z, y+z, x+y+z \}
\]

\[
\text{student-PL}
\]
As indicated above, Turkish has a *general number* and *strict plurality* distinction (see ibid. for a cross-linguistic discussion of this distinction).

**Predictions:**

(i) Numerals meaning greater than one combine with non-PL-marked NPs because nouns and bare noun phrases denote sets which not only have singular individuals but also the groups that can be formed from them:

(5) a. İki öğrenci        b. Üç öğrenci
    two student         three student
    ‘Two students’

c. $[[\text{öğrenci}]] = \{ x, y, z, x+y, x+z, y+z, x+y+z \}$

d. $[[\text{iki öğrenci}]] = [[\text{iki}]](\{ x, y, z, x+y, x+z, y+z, x+y+z \}) = \{ x+y, x+z, y+z \}$

e. $[[\text{üç öğrenci}]] = [[\text{üç}]](\{ x, y, z, x+y, x+z, y+z, x+y+z \}) = \{ x+y+z \}$

(ii) Bare NPs can be predicates to both singular and plural subjects:

    Ali student
    ‘Ali is a student.’

    Ali and Selin student
    ‘Ali and Selin are students.’

c. Bu çocuk-lar öğrenci.
    this child-PL student
    ‘These children are students.’

(iii) Bare NP arguments can have number neutral readings:

(7) a. Ben kitap oku-du-m
    I book read-Past-1Sg
    ‘I did book-reading.’ $\approx$ ‘I read one or more books.’
   Ali-Acc soldier beat-Evid pseudo-incorporation
   ‘Ali got soldier-beaten.’

≈ ‘Ali was/got beaten by one or more soldiers.’

Turkish p-incorporated NPs keep their number neutrality even under accomplishment readings. In this respect, they diverge from Hindi p-incorporated NPs, which yield strictly singular readings in similar cases:

Consider the following situations below adapted from Dayal (to appear: 29):

(8) a. Candidates = { Mary, Jane, Amanda }
   b. Candidates = { Bill, Mary, John, Chuck }

In (8a) a group of girls are competing candidates, and in (8b) there is one unique girl among the boys. The Turkish sentence below is felicitous in both contexts:

(9) Ali on dakika-da kız seçti.
   Ali ten minute-Loc girl choose-Past
   ‘Ali did girl-choosing in ten minutes.’
   ≈ ‘Ali chose one or more girls in ten minutes.’

However in Hindi, the p-incorporated version is felicitous in only (8b):

(10) Anu-ne das minat men larkii-ko cun liyaa.
    Anu-Erg ten minute in girl-Acc chose-COMPL
    ‘Anu did girl-choosing in ten minutes.’
    = ‘Anu chose one girl in ten minutes.’

(adapted from Dayal to appear: 30)

This dichotomy is consistent with Dayal’s claim that in Hindi, it is NumPs but not NPs that p-incorporate. We will return to this later.

In conclusion, number neutrality is an important fact about bare NP arguments in Turkish as well given that noun roots and non-PL-marked NPs denote not only atomic individuals but also groups that can be formed from them.
2.3 Pseudo-incorporation in Turkish and its relation to number marking

Turkish allows syntactically low, non-case-marked bare noun phrases as arguments to verbs, which are not in the same status with true arguments w.r.t certain properties they display but have a phrasal status unlike incorporated nouns.

Based on a variety of tests, some of which I will go over, Öztürk (2004, et seq.) argues that these bare NPs are pseudo-incorporated structures rather than true incorporation.

In what follows, I will be focusing on the properties of p-incorporation adapted from (ibid.), which I will use in my discussion of number marking in the following sections.¹

Transitives, unergatives, and unaccusatives all allow p-incorporated NPs as their arguments, which like being adjacent to the lexical verb, do not bear morphological case, and carry nuclear stress in focus-neutral contexts (11):

(11) Definite versus p-incorporated theme of a transitive

   Ali book-Acc read-Past  
   ‘Ali read the book.’

b. Ali kitap okudu.  
   Ali book read-Past  

Syntactically low, simplex manner adverbs can be higher than p-incorporated arguments (12a) but not Acc-marked arguments (12b-c) (also see Erguvanlı 1984):

    Ali slow book read-Past  
    ‘Ali did book-reading slowly.’

   Ali slow book-Acc read-Past  
   ‘Ali read the book slowly.’

c. Ali kitab-ı yavaş okudu.  
   Ali book-Acc slow read-Past  
   ‘Ali read the book slowly.’

¹ I would be happy to talk about the other properties I will not go over due to time and space reasons.
In (13) an example for a p-incorporated NP that targets the external argument of a transitive is given. When *polis* denotes a unique individual, it is observed in the sentence initial position (14) higher than the object:\(^2\)

(13) Ali-yi polis tutukla-dı.
    Ali-Acc police arrest-Past
    ‘Ali was/got police-arrested.’

(14) Polis Ali-yi tutukla-dı.
    police Ali-Acc arrest-Past
    ‘The police arrested Ali.’

However, *agent-oriented adverbs* cannot be used in such cases where a bare NP seems to target an agent:

(15) *Ali-yi bilerek /kasıtlı olarak polis tutukla-dı.
    Ali-Acc deliberately police arrest-Past
    ‘Ali was/got deliberately police-arrested.’

Two examples of unergatives with p-incorporated arguments are given in (16a-b). The NPs cannot be higher than the circumstantial adverbials in focus-neutral contexts. (16c-d) show NPs higher than these adverbials and are definite descriptions.

    tree-Loc bird sing-Prog
    ‘There is bird-singing in the tree.’

    b. Yan-da bebek ağlı-yor.
    next door-Loc baby cry-Prog
    ‘There is baby-crying next door.’

    c. Kuş ağaç-ta öt-uyor.
    ‘The bird is singing in the tree.’

    d. Bebek yanda ağlıyor.
    ‘The baby is crying next door.’

---

\(^2\) Or it can be observed in the preverbal position as in (i) below but this time unlike (13), it cannot carry sentential stress indicating that its syntactic position is not identical with the syntactic position of the bare NP and suggests an analysis in which the object has scrambled to the sentence initial position:

(i) Ali-yi, polis tı tutukla-dı → nuclear stress on the verb
    Ali-Acc police arrest-Past
    ‘The police arrested Ali.’
Unaccusatives complete the paradigm:

    village-dat doctor come-Past
    ‘There was doctor-coming to the village.’

    b. Doktor köy-e gel-di.
    doctor village-dat come-Past
    ‘The doctor came to the village.’ (Öztürk 2009: 335)

As expected, all p-incorporated NPs take narrow scope with respect to other quantificational elements (e.g. Negation (18) – we will see counterexamples to those shortly, though):

    Ali book read-Neg-Past  Ali-Acc soldier beat-Neg-Past
    ‘Ali didn’t read any books.’  ‘No soldier beat Ali.’

Why not true incorporation but pseudo-incorporation?

i. Q-particles and focus particles can intervene between the bare NP argument and its verb (19a)
ii. The verb can be elided without the bare NP argument (19b)
iii. Bare NPs allow for adjectival or participial modification (19c, d)
iv. They allow limited degrees of short distance scrambling in non-focus-neutral contexts (19e-f)

    Ali book Q-particle even read-Past

    Ali book read-Past, magazine not
    ‘Ali did book-reading, not magazine(-reading).’

    Ali sour apple eat-Past
    ‘Ali did sour apple-eating.’

    Ali read-Part book buy-Past

e. *Kitap* ben al-ma-di-m.
    book I buy-Neg-Past-1Sg
    ‘I didn’t do book-buying.’

f. Ben almadım *kitap*.
    ‘I didn’t do book-buying.’
2.4 Plural marked NPs can p-incorporate too

In addition to Öztürk’s cases where bare NPs undergo this process; non-case-marked PL NPs, which denote *strict plurality*, can actually act as p-incorporated arguments too, and display the same properties with the NP counterparts I outlined above. I specifically focus on the two properties in what follows.

(20) *Number-neutrality versus strict plurality*
      ‘Ali did one or more book-reading.’
      ‘Ali did two or more books-reading.’

The PL NP can be lower than the simplex manner adverb like the bare NP counterpart:

      Ali easy poem-PL write-Past  
      ‘Ali did two or more poems-writing easily.’
      Ali today poems easy wrote  

In (21b) the PL NP is not licensed above the simplex manner adverb even when it is inside the vP domain whose edge is taken to be marked by circumstantial adverbial in the language (see Arslan-Kechriotis 2006 for further discussion and examples).

Likewise when a PL-marked p-incorporated NP targets the agent, agent-oriented adverbials are not licensed in the structure:

      Ali-Acc soldier-PL beat-Past  
      ‘Ali was/got two or more soldiers-beaten.’
      Ali-Acc deliberately soldier-PL beat-Past  
      ‘Ali was/got deliberately two or more soldiers-beaten.’

Non-case-marked, low PL NPs do not act like true arguments in this respect. If we were to simply treat them as weak indefinite arguments, we could have trouble in explaining cases such as (22).

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3 Not all speakers are fine with this, although the structure gets definitely better when the PL NP is immediately postverbal, and still non-referential:
(i) Ali kolay yazdı şiirler.
The fact that some speakers find (21a) hard may be due to a prosodic constraint on length.
2.5 Why don’t plural p-incorporated NPs block the plural interpretation of bare NPs?

We know that in English, the singular blocks the plural in cases when we are referring to atomicity (Sauerland 2003; Sauerland et al. 2005) because the presupposition of the singular is stronger than the plural, which denotes general number.

In English, the competition is between general number (plural) and strict singularity.

Given that plural denotes strict plurality in Turkish, and non-plural-marking denotes general number, why doesn’t a PL NP block the plural reading of a bare NP? Why don’t bare NPs trigger only singular readings?

Proposal (inspired by Bale et al.’s treatment of Armenian):

(i) Two structures that have equal syntactic complexity can compete with each other (see Katzir 2008).

(ii) Plural marked p-incorporated NPs and bare NPs have different syntactic complexities.

(iii) Therefore the former do not compete with the latter and do no block it.

(iv) In English, plural and singular NPs have the same syntactic complexity therefore they compete and we see the relevant blocking effect.

The structure of the two types of p-incorporated NPs I propose are given below. The PL NP is syntactically more complex than the bare NP since it has an additional NumP layer.

(23) Plural-marked NPs

```
<table>
<thead>
<tr>
<th>NumP</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
</tr>
<tr>
<td>Num⁰</td>
</tr>
</tbody>
</table>
```

<table>
<thead>
<tr>
<th>kitap/asker</th>
</tr>
</thead>
<tbody>
<tr>
<td>book/soldier</td>
</tr>
</tbody>
</table>

(24) Bare NPs

```
<table>
<thead>
<tr>
<th>NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N⁰</td>
</tr>
</tbody>
</table>
```

| kitap/asker |

The Num head carries a PL feature, which pluralizes the predicative NP, mapping it onto a strict plurality.

In conclusion, (23) does not block the plural reading of (24) since they are not competing candidates.
3. Does Turkish have strict singularity?

3.1 The data

With more careful look, it is possible to see that these low, bare NPs, which are not PL-marked, can actually denote strict singularity.

Consider the context below:

I come to school and enter my office. I say to my classmates (out-of-the-blue; without metalinguistic intonation):

(25) Seda: I was quite hardworking today. Kitap oku-ma-di-m. Kitap-lar okudum. Book read-Neg-Past-1Sg book-PL read

‘I was quite hardworking today. I didn’t do book-reading. I did books-reading.’

Now consider the context below:

I’m a literature student and I’m talking to one of my classmates. I say that in order to get a good grade for one of my courses, I would write multiple poems but not one poem:

(26) Seda: Dersten iyi not almak için, şiir değil şiir-ler yaz-ar-im. In order to get a good grade from this course, poem not poem-PL write-Aor-1Sg

‘In order to get a good grade from this course, I can do not poem(-writing) but poems-writing.’

Significant note:

We now that in English, (27a), and (28a) do not entail (27b), and (28b) respectively. (27a) means (27c), and (28a) means (28c):

(27) a. The homework doesn’t contain difficult problems. (Spector 2007)
   b. The homework doesn’t contain a group of difficult problems.
   c. The homework doesn’t contain any difficult problems.

(28) a. I didn’t see birds.
   b. I didn’t see a group of birds.
   c. I didn’t see any birds.
One way to go for this intuition is adhering to the idea that plurality denotes general number in English, and when a PL-marked NP takes scope under negation, the atomic individuals and groups that can be formed from them in the extension of the plural NP are under negation.

**The puzzle:**

If bare NPs always denote general number just like the plural of English. How can we account for (25) and (26), which would otherwise mean the following?

(25) Seda: I was quite hardworking today. Kitap oku-ma-di-m. Kitap-lar okudum.

# ‘I was quite hardworking today. I didn’t read any books. I read multiple books.’

(26) Seda: Dersten iyi not almak için, şiir değil şiir-ler yaz-ar-im.

#‘In order to get a good grade from this course, I can’t/wouldn’t write any poems. I can/would write multiple poems.’

3.2 The three-way distinction

As we see in cases such as (25) and (26), there exists a distinction between strict singularity and strict plurality in the domain of NPs. Furthermore, under Negation, for instance, we clearly observe the reading that excludes strict singularity but not the reading we predict if we pursued the analysis that bare NPs **always** denote general number.

In the light of the data, I maintain a three-way distinction for Turkish:

(i) Bare NPs are ambiguous between “bare NPs”, which are number neutral, and NumPs that encode strict singularity:

(29) *Singular-marked NPs / strict singularity*  (30) *Bare NPs / number neutrality*

![Diagram showing the three-way distinction between bare NPs, singular-marked NPs, and NumPs.]

```plaintext
NumP
   /\   \  
  NP   Num^0
     /   [Sg]
    /  
   kitap/asker book/soldier
```

```plaintext
NP
   /\  
  N^0  
     /
    kitap/asker
```
(31) Plural-marked NPs / strict plurality

An exciting fact that may be validating (29)-(31): Armenian vs. Turkish

Bale et al. discuss that in Western Armenian and Turkish low-positioned, non-plural-marked NPs are number neutral. However Bale (p.c.) states that discourse contexts similar to (24) and (25) are completely infelicitous with bare NPs in Armenian (as far as his informants are concerned). This issue branches to multiple possible explanations. I’m contemplating on this.

Summary:

(i) Both NumPs and NPs can undergo p-incorporation in Turkish.

(This is not crazy. Dayal (to appear) quite convincingly discusses that it is a NumP that p-incorporates in Hindi but not bare NPs – recall the asymmetry between Turkish and Hindi in (9-10). There is theoretically no reason against NumPs that p-incorporate.)

(ii) Turkish has a three-way distinction for number marking:

   i. Noun roots and bare NPs $\rightarrow$ general number
   ii. NumP$_{sg}$ $\rightarrow$ strict singularity
   iii. NumP$_{pl}$ $\rightarrow$ strict plurality

(32)
(iii) Neither strict singularity competes with number neutrality nor does strict plurality since their syntactic composition is different from number neutral bare NPs.

5. Conclusion

In this part of my paper:

• I questioned the idea that Turkish has only a distinction between general number and strict plurality (contra Bale et al. *in press*).

• I maintained and showed that noun roots (and therefore a set of non-PL-marked NPs) are number neutral.

• I argued for the distinctions between:
  o Strict singularity and strict plurality
  o Number neutrality and strict plurality
  o Number neutrality and strict singularity

• I explained the absence and presence of competition effects among these based on structural complexity in the vein of Katzir (2008) and Bale et al. (*in press*).

• I claimed that not only NPs but also NumPs can undergo pseudo-incorporation in Turkish.

6. What else I’m working on for this paper

• Numerals and their semantic representation in Turkish

• Looking at definite descriptions and kinds (beyond p-incorporation)

• Contrasting Turkish with Armenian and delving into the points in which the two languages differ and the relevant implications for NP denotations and plurality.

• Showing that p-incorporation has other mysteries
References


Dayal, V. *to appear*. “Hindi Pseudo-Incorporation”, *Natural Language and Linguistic Theory*.


