

SYNTACTIC COMPOUNDINGS IN TURKISH

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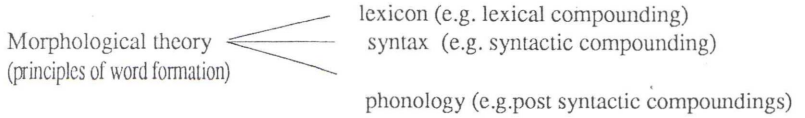
0. Introduction

So called Noun Incorporation (NI) in Turkish is a compounding process uniting two independent words. Semantically, incorporated noun becomes non-referential.

- (1) a. Ali kutu yap - tu.
A box make-PAST
'Ali made a box.' (Incorporation of DO)
- b. Kız yurd - un - a polis gir - di.
girl dorm-POSS-DAT police enter-PAST
'Police entered the girls' dorm.' (Incorporation of intransitive SBJ)
- c. Turhan - ı arı sok - tu.
T. -ACC bee sting-PAST
'A bee stung Turhan' (Incorporation of transitive SBJ)
(1a-c) is from Knecht 1986:101)
- d. Ali çocuk bak - ıyor.
A child look after-PROG
'Ali is looking after a child.' (Incorporation of oblique OBJ)

The incorporation of an argument into a verb is syntactic in that the unit is not morphologically complex¹ as it always is in other languages. The unit is semantically compositional, and the compounding process is productive except for (1d). (For this reason, we do not deal with oblique object incorporation in this paper; it might be a lexical process.)

Several theoretical approaches have been reported to the incorporation phenomena in Turkish. Mithun (1984), Nilsson (1984) suggest a lexical treatment. Baker (1988) suggests a syntactic treatment within the framework of Government and Binding and Knecht (1985), Özkaragöz (1986) suggest a syntactic treatment within the framework of Relational Grammar. What is the most interesting problem concerning the general linguistic theory is whether given data argue for or against the strong Lexical Hypothesis, which holds that syntactic processes are not allowed to build or change words. We will propose that compoundings dealt within this paper are formed syntactically and the phenomena in question can be handled well within modular approach to the word formation theory advocated by Shibatani & Kageyama (1989). It can be depicted as follows. (=S & K's Figure 4)



NI in Turkish is different from a regular compounding process, which is formed in the lexicon, in the following points. a) NI has a finite form; e.g. kitap oku - mak "book read -INF" (cf. [baba-anne] N' paternal mother'). b) NI has a word boundary between an incorporated noun and a verb. c) NI is semantically compositional; e.g. kitap oku - mak 'to read a book', (cf. [kül - bas - tı] "ash -push-past" = 'grilled meat'). However, NI also has general properties of word formation (principle of word formation) like a) exclusion of case particles, b) morphological integrity, c) binary branching etc. In other words, word formation processes take place not only in the lexicon but also in other domains of grammar, namely in the syntax.

In order to demonstrate that NI occurs in syntax, in section 1, we will show that the clause union, which is triggered by causative or passive, occurs before the NI. If the rule order is reverse, we can not explain the transitive case pattern of NI structure when it is made causative. In section 2, we will show that the formation patterns of NI in Turkish obey the properties of syntactic NI, comparing with regular lexical counterparts. At the same time, in section 4, we will point out the interesting properties of NI which occur in relative clause constructions in contrast with those of NI which occur in simple sentences.

1. Syntactic Compounding

One of the crucial evidence that NI occurs in syntax is from the interaction with causative. An intransitive subject is marked accusative when its predicate is made causative (Intransitive pattern), whereas a transitive subject appears in the dative (Transitive pattern). If object incorporation (OI) process is detransitivization (cf. Knecht 1986:99), and applied before the causative rule, the output sentence must be the intransitive pattern. But this is not the case as can be observed in the grammatical sentence below. It shows the transitive pattern.

- (2) Yılmaz Ali - ye kutu yap - tır - dı.
Y. A. -DAT box make -CAUS-PAST
'Yılmaz made Ali make a box.'

Hence, we assume OI rule operates after the causative rule. If the causativization is a syntactic rule as proposed by Knecht (1985). Özkaragöz (1986), the rule of order assumed above tells us the OI is also syntactic rule 3.

Additional data which support the syntactic nature of causativization comes from the fact that bi-sentential structure is made into simplex structure nature of the sentence. The antecedent of the reflexive pronoun *kendi* must be a subject.

- (3) a. Ben kendi - m - i yıka -dı- m.
 I self -ISG-ACC wash-PAST-ISG
 'I washed myself.'

However, in causative construction, indirect object can be the antecedent of *kendimi*.

- b. Hasan bana kendimi yıka - t - ti.
 I -DAT self wash -CAUS- PAST
 'Hasan made me wash myself.'

This fact shows that causative were analyzed as underlying bi-sentential and reflexivization can apply in the embedded clause before clause union.

Another data which support the syntactic nature of NI comes from the fact that bi-sentential structure is made into simplex structure in the Infinitival Double Passive construction. I assume that NI applies after passive.

- (4) Kabak ye - n - di.
 squash eat -PASS-PAST
 'A squash is eaten.'

In (4), generic object *kabak* can undergo passive and then is subsequently incorporated as subject. Hence, the rule order assumed here is as follows: PASS -NI. In order to demonstrate that NI is syntactic, we must find the syntactic nature of passive. Following data tells us that clause reduction triggered by passive rule removes the bounding factor, namely, a complex structure is made into a simplex structure by passive. Evidence is found in Leaking, Adverb Scope Assignment, and Adverb Insertion. In Turkish major constituents may follow the verb, where they are marked with a special falling intonation. Acceptability of (5b) shows that *viski* becomes major constituents after clause union ([5-7] is from George and Kurnfilt, 1977).

- (5) a. *Dün yazarlar i [ø i ____ iç - meğ] - e razı oldular viski - yi.
 yesterday writers drink -NOMZ-DAT consent- PAST Whisky-ACC
 'Yesterday, the authors consented to drink the whisky.'

- b. Dün ____ yazarlar tarafından içilmeğe çalışıldı bu viski.
 PASS PASS

Adverbs, *dün* and *yarın* can not modify the same clause, because they have opposite meanings. Hence, (6b) shows that the sentence is no longer bi-sentential.

- (6) a. Dün yazarlar i [ø i viski yarın içmeğ] - e razı oldular.
 yesterday tomorrow
 'Yesterday, the authors consented to drink the whisky tomorrow.'

- b. *Dün bu viski yazarlar tarafından yarın içilmek isteniyordu.
 PASS PASS

'Yesterday, this whisky was wanted to be drunk by the authors tomorrow.'

- (7) a. dün yazarlar [ø i viski -yi * iç - meğ] - e çalış - ıl - dı.
 yesterday writer whisky-ACC drink-NOMZ-DAT try-PASS-PAST
 'Yesterday, this whisky was tried to be drunk by the authors.'

b. Dün bu viski yazarlar tarafından içilmeğe çalışıldı.

PASS PASS

In (7a), adverbs can be inserted between an embedded verb and main verb, because the sentence is bi-sentential in nature. Thus the existence of clause union triggered by passive indirectly supports the syntactic nature of NI rules.

2. Noun incorporation as word formation

In this section, although NIs are derived in syntax, they also show properties of a word, which include, a)exclusion of case particle, b) morphological integrity, c) binary branching, d) stress assignment.

Exclusion of case particle is a formal characteristic of compound words. As stated in the Introduction and related examples an incorporated object has no case marking. In Turkish, there is no overt nominative making, hence incorporation of subject is also caseless.

Morphological integrity means that compound makes up a tight unit. No noun phrase or adverb may intervene between the non-referential DO and the verb. (cf. Erguvanlı, 1984:23-4)

- (8) *Murat kitap isteksiz oku - yor.
 M. book unwillingly read -PROG
 'Murat is reading a book unwillingly.'

Binary Branching Condition (Selkirk 1982) prohibits three or more branchings in morphological structure. A word formation rule attaches one and only one part at a time. This is also attested in Turkish.

- (9) a. [[güzel [kitap] [okuyan] adam]
 b.*[[güzel][kitap] [oku-yan] adam]
 good book read-PART man
 'The man who read a good book.'

It must always branch in a binary fashion as (9a).

The assignment of sentence stress in Turkish falls on the verb, but when an object is incorporated into a verb, it falls on the object or subject (cf. Dede, 1986:153; Knech,1985:90-2). This is also seen in the lexical compound in which stress is assigned to the syllable in the first element of the compound, that regularly receives primary stress.

- (10) a. boyun bağ 'neck tie' (boyun 'neck'; bağ 'tie')

- b. kız lisesi 'girls' school' (kız 'girl'; lise 'high school')
 c. dans et - 'to dance'

(Knecht, 1985:91)

This kind of stress assignment does not hold as a universal property of word formation. For this reason, one of the specific properties of Turkish is that the definiteness of noun phrase is expressed by word order or stress (Dede, 1982:45).

Particularly, intriguing is the fact that NI does not follow the First Sister Principle (Roeper & Siegel 1978), which is considered to be a general property of word formation. The First Sister Principle says that a transitive verb is allowed to combine with its first sister noun in the verb's strict subcategorization frame. However, as shown in (1c), incorporation of transitive subject is possible in Turkish, although the prohibition of transitive subject is universally reported for NI (Mithun 1984). This fact might implicate that syntactic word formation takes place after the rule of Indefinite Movement (Underhill 1972).

3. Noun incorporation as a syntactic word formation

In this section, we will present evidence that NI is syntactic in contrast with word formations formed in the lexicon.

Syntactically derived NI does not affect the argument structure of a sentence (non-relation changing property: Shibatani & Kageyama 1989). In (11), the indirect object still marks dative case after NI occurs.

- (11) a. Hasan bana kitab - ı ver - di.
 H. me DAT book -ACC give -PAST
 'Hasan gave me the book.'
- b. Hasan bana kitap verdi.
 me DAT book NOM
 'Hasan gave me a book.'

In contrast, generally lexical compounds do not allow this kind of incorporation at all.

- (12) a. Baş - ım - ı dinlemek isti - yor - um.
 head-1SG-ACC listen want-PROG-1SG
 'I want to have a rest.'

b. *Başım / *Baş dinlemek istiyorum.

Lexically derived compound (kayıp+olmak= kaybolmak) does not allow gapping as (13a), but syntactically derived NI allows it as (13b) (cf. Kageyama, 1982:246) 4.

- (13) a. *Yılmaz - ın kitab - ı kaybol - du, benim-ki-de ø ol - du.
 Y. GEN book-ACC lose - PASTmine too become-PAST
 'One lost Y's book, one lost mine, too.' ø=kayıp

- b. Yılmaz kitap oku -yor, ben de ø oku - yor - um.
 book read-PROG read -PROG-ISG

'Yılmaz is reading a book, I am reading a book, too.' ø=kitap

It is worth noting that, generally subject incorporations do not have their idiomatic counterparts. Namely, there are very few subject-verb idioms. In general, a verb of the idiom is represented at D-structure to assign the needed exceptional role. The small number of subject-verb idioms indicates to us that the subject-verb compounds might be generally formed in elsewhere other than the lexicon. In other words, the property of syntactic compoundings has to do with **sematic compositionality**. This is also the case of OI structures.

4. Incorporation in nominalized and inflected form

The NI structure is found in two different constructions, i.e., nominalized form like relative clause 514a) or embedded clause (14b) 5 and inflected forms which appear in main clause like (14c).

- (14) a. Kitap oku - yan adam.
 book read-PROG man
 'The man who read a book.'

- b. Ben kitap oku - ma - yı unut - tu - m.
 I NOMZ-ACC forget-PAST-ISG
 'I forget to read a book.'

- c. Ben kitap oku - ru - m.
 read-AOR-ISG
 'I read a book.'

NI shows different characteristics according to the construction types. OI and Sı in inflected form are not permitted when an incorporated noun has a phrasal modifier as (15). (No Phrase Constraint: Scalise 1984)

- (15) a. *Ben güzel kitap okudum.
 good
 'I read a good book.'

- b. *Okul - un yanında büyük ev yandı.
 big
 'A big house burned in the side of school.'

However, in nominalized form, it is acceptable.

- (16) a. Güzel kitap okuyan adam.
 'The man who read a good book.'

b. Yanında büyük ev yanan okul.

'The school next to which a big house burned down.'

In addition to this, non-referentiality seems to be one of the properties of OI, because non-referential form can not be pronominalized as noted in Erguvanlı (1984:23). However, this is not the case in nominalized form.

- (17) Orada ilginç kitabı oku - yan adam gör - dü - m.
over there interesting book read-PART man see-PAST-ISG

Onu ben de oku - mak isti - yor - um.
it I too read-INF want-PROG-ISG

'I saw the man who read an interesting book over there, I want to read it
(an interesting book), too.

We observed that NI in nominalized form allows an anaphoric relation to hold between an element inside and outside it. In other words, the Anaphoric Island Constraint (Postal 1969), which has often been held to be a characteristic of words can not be applied to the nominalized form. The difference in the applicability of the constraint for the word like the No Phrase Constraint, the Anaphoric Island Constraint follows that the nominalized form shows more characteristic properties of syntactic word formation. These facts are also in accordance with the claim implicated by Kennelly (1986) that nominalizeraffixation in nominalized forms may take place in syntax.

5. Conclusion

We have presented indirect evidence that NI occurs in syntax with respect to rule ordering in section 1. Then, we have explored the dual nature of NI. Namely, on the one hand, the nature of NI follows from principles of word formation rule as shown in section 2, on the other hand, NI has specific properties, which lexical compound generally does not have, as shown in section 3. Especially, in section 4, characteristic properties of syntactic word formation found in nominalized form emphasize that the syntactic process participate in word formation. These , syntactic-lexical contradictions are manifested within modular approach to word formation. At the same time, our findings implicate that a strict interpretation of lexicalism is untenable.

NOTES

I would like to thank Dr. Sumru Özsoy for helpful comments on an earlier draft. All inadequacies are my own.

1. There is a word boundary or a boundary stronger than a morpheme boundary. (cf. Knecht, 1985:89)

2. For details, see Knecht, 1985:89-90.

3. Knecht (1986:117) reports that subject incorporation sometimes precede causative formation; (a), in which subject incorporation occurs, is derived from (b).

a. Bir gün mühendis - ler ev - im - e su ak - it - acak - lar.
 one day engineer-PL house-ISG-DAT water flow-CAUS-FUT-PL
 'One day engineers will make water flow to my house.'

b. Evime su akacak.
 'Water will flow to my house.'

Our theory however, predicts NI is not allowed to precede causative. This is not the case of subject incorporation, rather *akit* is derived as transitive verb in the lexicon, and then incorporates *su*. Hence, this is the case of object incorporation. Generally, subject incorporation does not interact with causative, but it seems sometimes possible only when the verb is unaccusative and has corresponding transitive verb. Hence, this is also the case of object incorporation.

c. Doktor anne - ye bebek doğ - ur - t - acak.
 doctor mother-DAT baby be born-CAUS-CAUS-FUT
 'The doctor will make mother give birth a child.'

4. One exception is the case of *etmek* 'to do', which is often used for the formation of new verbs, especially from foreign roots; e.g. *ziyaret etmek* 'to visit'. This compound is considered to be formed in the lexicon, because the first portion of the compound, namely *ziyaret* does not have a direct object relation to the verb; e.g. **ziyaret-i et-mek* (visit-ACC do-INF). Rather the compound as a whole functions as one verb like the case of lexicalized compound as follows.

a. Ben Yılmaz 'ı ziyaret et - ti - m.
 I Y -ACC visit do-PAST-ISG
 'I visited Yılmaz.'

In addition to this, *et - mek* is often written closely with a foreign root as *affetmek* 'to forgive', which also indicates lexicalization. In spite of their lexical characteristics, *etmek* behaves like a syntactic compound with respect to gapping. It allows gapping as follows.

b. Yılmaz araba -yı tamir et - ti, ben de bisiklet - i ø et - ti - m.
 Y car -ACC repair do-PAST I too bicycle-ACC do-PAST-ACC
 'Yılmaz repaired the car, I repaired the bicycle, too.' ø=tamir

5. Inflected form can also appear in embedded clauses.

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