

Word Order and Syntax of Causative, Passive and Relative Clauses in Turkish*

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Kim, Hye-Kyung. 2008. Word Order and Syntax of Causative, Passive and relative Clauses in Turkish. *The Linguistic Association of Korea Journal* 16(3), 233-255. This paper examines syntactic structure as well as morphological structure of causative clauses, passive clauses, and relative clauses in Turkish, based on Greenberg's (1963) universals, the Head-Dependent Theory (HDT), and the Branching Direction Theory (BDT) proposed by Dryer (1992). We will confirm that the Turkish language shows double-marking patterns by Nichols's (1986) definition, and that Baker's (1985) Mirror Principle is applicable to Turkish data. Baker's (1985) claim requires that syntactic processes occur in the same order as their corresponding morphological processes. Finally, we will also confirm that the Accessibility Hierarchy proposed by Keenan & Comrie (1977) can be supported by the fact that in Turkish relative clauses, subjects, direct objects, oblique objects, and possessors can be relativized. Keenan & Comrie (1977) argue that if anything can be relativized in a language, subjects can be relativized as well.

Key Words: Head-Dependent Theory, Branching Direction Theory, double-marking patterns, Mirror Principle, Accessibility Hierarchy

1. Introduction

Turkish is a member of the Turkic family of languages. The Turkic

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languages are spoken by over one hundred million people, from south-east Europe to the upper areas of the Yenisei (Central Siberian Russia) and into China (Lewis, 1989). Turkish accounts for some 40 percent of the total number of speakers of Turkic languages. Turkish is the official language of Turkey, and the largest number of Turkish speakers outside Turkey is found in the Balkans (especially Bulgaria), the former Yugoslavia (especially Macedonia), and Greece (Kornfilt, 1997).

These languages share three features such as agglutination, vowel harmony, and lack of grammatical gender. First, Turkish is an agglutinating language, so its words are able to carry many suffixes. Suffixes added to the stem of the verb may indicate affirmative or negative forms of the passive, reflexive, causative, reciprocal voices. Further suffix additions for tense and person can occur. In particular, voice suffixes such as the causative, the passive, the reflexive, and the reciprocal alter the function of the major constituents in a sentence. In most cases, the final suffix of a verb derived in this manner automatically indicates the transitivity or intransitivity of a stem. Nouns are also suffixed with possessors and case affixes. Secondly, Turkish exhibits vowel harmony. When a suffix is attached to a stem, the vowel in the suffix is adjusted to harmonize with the last vowel in the stem. Thirdly, Turkish has no grammatical gender, thus the personal pronoun *o* means *he*, *she*, or *it*. Furthermore, postpositions are used instead of prepositions, and there is no word corresponding to the definite article *the*. Only the contexts tells us whether to insert *the* when translating into English.¹⁾

This paper is organized as follows: Section 2 briefly describes the general characteristics of Turkish word order with special reference to the morphological structure as well as the syntactic structure of the

1) The relevant examples are as follows (Lewis, 1989, p.18):

- (i) a. a. Çay pahalı 'Tea is expensive'
 tea expensive
 b. Çay soğuk 'The tea is cold'
 cold

noun phrases (NPs), verb phrases (VPs), and postpositional phrases (PPs). In sections 3-5, the syntactic structures of the Turkish language such as the causative, the passive, and the relative clauses will be discussed in detail especially in terms of a typological point of view. Section 6 summarizes and concludes our discussion.

2. Basic Word Order

2.1. SOV Word Order

In Turkish, word order varies. Major constituents can occur in any order, but the unmarked order is subject (-object)-predicate (SOV) in verbal sentences as in (1) and subject-predicate in nominal sentences as in (2).²⁾

- (1) Ali ev-i sat-tı.
 Ali house-ACC sell-PF³⁾
 SBJ OBJ PREDICATE 'Ali sold the house.'
- (2) (Ben) yorgun-um.
 (I) tired
 SBJ PREDICATE 'I'm tired.'

2) In this paper, all Turkish data other than some data with a specific citation are taken from Göksel & Kerslake (2005). In that case, the specific citation will not be present.

3) Abbreviations used in this paper are as follows: 1(first person), 2(second person), 3(third person), ABL(ablative case), ACC(accusative case), ADJ(adjective/adjectival), ADV(adverbial), AOR(aorist), AUX(auxiliary verb), CAUS(causative), CL(clitic), COM(comitative), CV(converb marker), DAT(dative case), DET(determiner), DER(derivational suffix), EP.COP(epistemic copula), EV.COP(evidential copula), FUT(future), GEN(genitive), GM(generalizing modality), IMPF(imperfective), INFL(inflectional suffix), INS(instrumental), INT(interrogative), INTR(intransitive), LOC(locative case), NC(noun compound), NEG(negative), OBJ(object), OPT(optative), PART(participle), PASS(passive), P.COP(past copula), PF(perfective), PL(plural), POSS(possessive), PSB(possibility), REC(reciprocal), SG(singular), SBJ(subject), SUB(subordinating suffix), TR(transitive), VN(verbal noun marker).

The predicate shows agreement with the subject in terms of person and number. In all sentences with a 1st or 2nd person subject, the appropriate person suffix on the predicate is obligatory, regardless of the presence of the subject, as in (2) (see examples (10), (15) and (19) below for the verbal sentences).

The main properties of an unmarked sentence in Turkish are summarized as follows: “(i) The predicate is at the end; (ii) The subject is at the beginning; (iii) A non-case-marked direct object, or any indefinite constituent with the occasional exception of an animate subject, occurs immediately before the verb; (iv) An oblique object is placed immediately before the verb (Göksel & Kerslake, 2005, p.389).” A general rule of Turkish word order is that modifiers precede the modified (that is, their head). Therefore, usually adjectives (Adjs) used attributively precede nouns (Ns),⁴⁾ adverbs (Adv) precede verbs (Vs), and objects of postposition precede postpositions (Ps). Also, in a sentence, subjects precede predicates, and objects precede verbs.

However, as shown in (3) below, scrambled sentences are also equally grammatical in Turkish because it is usually assumed that changing the order of the constituents in a sentence can be used as a means of distinguishing new information from background information and of making a certain constituent prominent in the discourse.

- (3) a. Evi Ali sattı. (OSV)
 b. Ali sattı evi. (SVO)
 c. Evi sattı Ali. (OVS)
 d. Sattı Ali evi. (VSO)
 e. Sattı evi Ali. (VOS)

It seems that Turkish sentences can be scrambled in a more free way than Korean and Japanese. However, the above examples can have slightly different meanings depending on the contexts. In this paper, we will not analyze word order variations because scrambled sentences are closely related to the acoustic quality of stress in Turkish, which is not

4) When adjectives precede nouns, they do not have to agree in number or case.

the scope of our research.

2.2. Structure of the NP

The Turkish NP consists of an obligatory constituent, called the head, and one or more optional constituents, known as modifiers. All modifiers in the NP precede their head as in (4). In each case the head is shown in bold.

- (4) a. **oda** 'the *room*'
 b. büyük bir **oda** 'a large *room*'

On the other hand, modifiers that may be present in an NP fall into two classes. Determiners (e.g., *bu* 'this', *aynı* 'the same', *her* 'every', etc.) constitute a small class of items whose function is to specify the limitation of the potential referent of an NP. Adjectivals range from single adjectives (e.g., *iyi* 'good', *zengin* 'rich', etc.) through various kinds of more complex forms and phrases to relative clauses. Consider the following examples. In each case the modifiers are indicated in bold.

- (5) **küçük** **bir** kız
 little(ADJ) a(DET) girl(N)
 'a little girl'
- (6) **şu** **raf-ta-ki** **bütün** **eski** kitap-lar
 that(DET) shelf-LOC-ADJ(ADJ) all(DET) old(ADJ) book-PL(N)
 'all the old books on that shelf'

The main word formation process in Turkish is suffixation, the attachment of an affix to the right side of a root. The order in which nominal inflectional suffixes appear on the stem is number-possession-case as exemplified below:

- (7) çocuk -lar -ın -a
 child -PL -2SG.POSS -DAT
 NUMBER POSSESSION CASE 'to your children'

marking is the possessor, whereas the N(P) (the head) which carries possessive marking is the entity which is possessed. The possessive suffix on the head must agree with the possessor in terms of grammatical person. This phenomenon, proposed by Nichols (1986), is called double-marking, which means that marking may occur both on the head and on the dependent at the same time. Turkish also follows the double-marking pattern in clause relations since the finite verb in a sentence does not carry any case suffixes (see example (1)), but the non-finite verb does (see subsection 2.3).

Lastly, Turkish has the five case suffixes such as accusative case marker $-(y)I$, dative case marker $-(y)A$, locative case marker $-DA$, ablative case marker $-DA(n)$, genitive case marker $-(n)In/-Im$.⁸⁾ However, note that there is no nominative case marker in Turkish (Whaley, 1997; Göksel & Kerslake, 2005). An NP is left without case marking when it functions as the subject of a main clause or a finite subordinate clause or an adverbial clause. Consider the following main clause:

(10) Ben bu makale-**yi** yarın bitir-eceğ-**im**.

I this article-ACC tomorrow finish-FUT-1SG

'I shall finish this article tomorrow.' (Whaley, 1997, p.154)

On the other hand, the clitics in Turkish follow the suffixes that occur on the final word of a phrase. Some clitics undergo vowel harmony, but others do not. In most cases, derivational suffixes precede inflectional suffixes, so clitics occur after inflectional suffixes, as in (11).

(12) suç - lu - luk - la mı

crime-N.DER-N.DER-INS INT

DER-DER-INFL-CL 'in a guilty manner?'

8) Consonant alternation in suffixes such as t/d is shown by the use of the capital letter D . In particular, t follows $p, t, k, f, h, ç, ş, s$, whereas d follows vowels and $b, d, c, v, l, m, n, j, r, z, y, ğ$ (e.g., *oda-da* 'in the room', *sokak-ta* 'in the street').

Here we can confirm Greenberg's (1963) Universal 28; according to which, "If both the derivation and inflection follow the root, or they both precede the root, the derivation is always between the root and the inflection" (p.93).

2.3. Structure of the VP

In Turkish, a VP consists of a verb, its complements and adverbials that modify the verb. The VP consists of an inflected verb alone as in (12), or a verb and an adverbial as in (13), or a verb, its complement and three adverbials as in (14).

- (12) **Oturuyorum.**
sit(V) 'I am *sittingdown*.'
- (13) **Yavaş yürü.**
slowly(ADV) walk(V) '*Walkslowly*.'
- (14) **Suyu yavaşça sürahiden masadaki bardağa döktü.**
water(N)slowly(ADV) from the jug(ADV) into the glass on the table(ADV) pour(V)
'S/he *slowly poured the water from the jug into the glass*.'

In particular, there are two types of complements, direct objects and oblique objects. In Turkish, the NP which constitutes the direct object is usually non-case-marked if it is non-definite (i.e. indefinite or categorical) as in (15) and (16),⁹⁾ but if it is definite, it has the accusative case marker-(y)I as in (17).

- (15) **Birmekktup yaz-dı-m.**
a letter write-PF-1SG 'I wrote *aletter*.'
- (16) **Yaz-lar-ı açık hava sinema-sın-da film seyr-ed-er-ler-di.**
summer-PL-NC open air cinema-NC-LOC film watch-AUX-AOR-3PL-P.COP
'They used to watch *films* in outdoor cinemas in the summer.'

9) A categorical NP denotes an unspecified quantity of a certain substance.

- (17) **Bu parça-yı** ancak çok iyi bir piyanist çal-abil-ir.
 this piece-ACC only very good a pianist play-PSB-AOR
 'Only a very good pianist can play *this piece*.'

As for oblique objects, they have one of the dative, locative, ablative or comitative/instrumental markers. Each case of the oblique objects is given below respectively.

- (18) a. Herkes **piyanist-e** bayıl-du.
 Pianist-DAT adore-PF
 'Everyone adored *the pianist*.'
- b. Çocuk [**okul-a git-me-mek**]-te diret-iyor.
 School-DAT go-NEG-VN-LOC insist-IMPF
 'The child insists *on [not going to school]*.'
- c. Nermin bir gün geldi ki [**yemek yap-mak**]-tan bıkt-ı.
 food-make-VN-ABL be.fed.up.-PF
 'The day came when Nermin get fed up *with [cooking]*.'
- d. Erol **sinema-yla** çok ilgilen-iyor-du.
 Cinema-COM/INS very be.interested-IMPF-P.COP
 'Erol was very interested *in films*.'

In Turkish, there are two distinct types of verb forms such as finite and non-finite. The inflectional suffixes that appear in finite verb forms are the following: (i) voice suffixes, (ii) the negative marker, (iii) tense/aspect/modality markers, (iv) copular markers, and (v) person markers. A finite verb form in Turkish obligatorily has a person marker, which indicates the subject. Consider the following:

- (19) Otur-acağ-**ım**.
 sit down-FUT-1SG
 'I'm going to sit down.'

The order in which the suffixes appear in a finite form is root-voice-negation-tense/aspect/modality-copula-person marker-*Dir* as shown in (20).

- (20) Döğ-üş -tür -t -ül -me -yebil-iyor -muş -sunuz -dur.
 beat-REC-CAUS-CAUS-PASS -NEG -PSB-IMPF -EV.COP -2PL-GM¹⁰
 'It is presumably the case that you sometimes were not made to fight.'

Copular markers are made up of the copula *-(y)-* and the suffixes *-DI*, *-mİş* and *-sA*. Person markers are attached to verbal predicates as well as nominal predicates to specify the subject.

On the other hand, the inflectional suffixes that can appear in non-finite verb forms are as follows: (i) voice suffixes, (ii) the negative marker, (iii) tense/aspect/modality markers, (iv) subordinating suffixes, and (v) nominal inflectional suffixes. The order of the suffixes in a non-finite verb form is root-voice-negation-subordinating suffix-nominal inflectional markers as shown in (21).

- (21) bak -tır -ma -**dığ** -ın -dan
 check -CAUS -NEG -SUB -2SG.POSS-ABL
 'because you haven't had [it] checked'

Voice markers such as causative, passive, reflexive, and reciprocal

10) The generalizing modality marker *-Dir* follows person markers, except in the case of the 3rd person plural suffix *-lar*, which it may precede or follow (Göksel & Kerslake, 2005, p.86):

- (i) 1st person singular: *gid-iyor-um-dur* 'I'm presumably going'/ 1st person plural: *gid-iyor-uz-dur* 'we're presumably going'
 (ii) 2nd person singular: *gid-iyor-sun-dur* 'you're presumably going'(informal), *gid-iyor-sunuz-dur* 'you're presumably going'(formal)/ 2nd person plural: *gid-iyor-sunuz-dur* 'you're presumably going'
 (iii) 3rd person singular: *gid-iyor-dur* 's/he's presumably going'/ 3rd person plural: *gid-iyor-lar-dur/gid-iyor-dur-lar* 'they're presumably going'

come immediately after the verb root preceding all other suffixes. More than one voice suffix can attach to a verb, and the order in which they are attached is very important because these suffixes influence the meaning of a clause. The possible combinations of voice suffixes are as follows: (i) causative (+causative) + passive, (ii) reciprocal + causative, (iii) reciprocal + passive, (iv) reciprocal + causative + passive, (v) reflective + passive. Two examples of each combination are given below (Göksel & Kerslake, 2005, pp.155-156).

(22) a. *Causative(+Causative)+Passive*

Bütün öğrenci-ler-e resim-ler yap-**tır-t-ıl**-dı.
 all student-PL-DAT picture-PL paint-CAUS-CAUS-PASS-PF
 ‘All the students were made to paint (pictures).’

b. *Reciprocal+Causative*

Baba-ları kardeş-ler-i öp-**üş-tür**-dü.
 father-3PL.POSS sibling-PL-ACC kiss-REC-CAU-PF
 ‘The(ir) father *made* the sisters/brothers kiss *each other*.’

Negative marker *-mA* is used for negating verbal sentences as in (23a) and subordinate clauses as in (23b).

(23) a. Ağaçları kes-**me**-yecek-ler.

cut.down-NEG-FUT-3PL

‘They won’t cut down the trees.’

b. Ahmet [Zeki’yi gör-**me**-yeceğ-in]-i iddia ediyordu.

see-NEG-VN-3GS.POSS-ACC

‘Ahmet was claiming that he would not see Zeki.’

2.4. Structure of the PP

Turkish does not have any prepositions, but has a large number of

postpositions which follow their complements. This fact can be captured by Greenberg's (1963) Universal 27, which states "If a language is exclusively suffixing, it is postpositional" (p.93).¹¹⁾

The PP consists of an NP followed by a postposition. The postposition is the head of the PP, and the NP is its complement. Turkish postpositions may be classified according to the way in which they relate syntactically to their complements. They are bare postpositions as in (24a, b) and possessive-marked postpositions as in (24c).

- (24) a. sen-in için
 you-GEN for 'for you'
- b. çıkış kapı-sın-a doğru
 exit gate-NC-DAT towards 'towards the exit'
- c. ev-imiz-in arka-sın-da
 house-1PL.POSS-GEN back-3SG.POSS-LOC 'behind our house'

So far, we have focused on Turkish word order and morphological structure as well as the syntactic structure of the NPs, VPs, and PPs. In the next sections, the syntax of causative, passive, and relative clauses are discussed by turn in detail.

3. Causative clauses

The causative suffix can attach to both transitive and intransitive verbs.¹²⁾ When the causative suffix is attached to a transitive verb, it

11) In Turkish, however, prefixes can be used only with loan words except for *anti-* (e.g., *antidemokratik* 'antidemocratic', *gayrimüslim* 'non-Muslim', etc.). Reduplicative prefixes are also possible in specific contexts to accentuate the quality of an adjective and to generalize the concept denoted by a particular word to include other similar objects or events (e.g., *uzun* 'long' → *upuzun* 'very long', *katı* 'hard' → *kaskatı* 'hard as a rock', etc.).

12) Almost all verb stems ending in the passive, reflexive or reciprocal

expresses the concept of ‘cause’, ‘make’, or ‘have’. Consider the following:

- (25) Her gün camlar-ı sil-**dir**-iyor-lar.
 Every day windows-ACC wipe-CAUS-IMPF-3PL
 ‘They *have* the windows cleaned every day.’

In a causative construction based on transitive verbs, the performer of the action denoted by these verbs (i.e., the causee) can be expressed by a dative-marked NP as shown below. The causee is usually human, but can also be an inanimate entity such as a car or other machine to which inherent power is attributed.

- (26) Nuran **Deniz-e** kapı-yı aç-**tır**-dı.
 Deniz-DAT door-ACC open-CAUS-PF
 ‘Nuran made Deniz open the door.’
- (27) Dişçi mektub-u **müdür-e** imzala-**t**-tı.
 dentist letter-ACC director-DAT sign-CAUS-PAST
 ‘The dentist *made the director* sign the letter.’(Comrie, 1976, p.263)
- (28) **Annesin-e** bulaşık yıka-**t**-mı-yor.
 his/her mother-DAT dishes wash-CAUS-NEG-IMPF
 ‘S/he doesn’t *let his/her mother* wash the dishes.’

Causative constructions with dative-marked NPs can be ambiguous

suffixes (e.g., *-Il, -(In, -(I)ş)*) or the composite suffixes (e.g., *-lAn* or *-lA(ş)*) are intransitive, and verb stems ending in the causative suffix (e.g., *-DIr, -t, -It, -Ir, -Ar, -Art*) or the composite suffix (e.g., *-lAt*) are transitive as illustrated below (Göksel & Kerslake, 2005, p.145):

- (i) Transitivity of an intransitive verb by attaching the causative suffix
- | | |
|---------------------------|--|
| <i>değiş-</i> ‘change’ | <i>değiş-tır-</i> ‘change (something)’ |
| <i>yürü-</i> ‘walk’ | <i>yürü-t-</i> ‘make (someone) walk’ |
| <i>çık-</i> ‘go/come out’ | <i>çık-ar-</i> ‘remove, get (something) out’ |
- (ii) Intransitivity of a transitive verb by attaching the passive or reflexive suffix
- | | |
|-----------------------|--------------------------------|
| <i>yık-</i> ‘destroy’ | <i>yık-ıl-</i> ‘be destroyed’ |
| <i>ört-</i> ‘cover’ | <i>ört-ün-</i> ‘cover oneself’ |

because a dative-marked NP could have an adverbial function, as in (29).

- (29) Bu ev-i **Ahmet-e** yap-tır-dı-m.
 this house-ACC Ahmet-DAT make-CAUS-PF-1SG
 ‘I got *Ahmet* to build this house.’
 ‘I had this house built *for* Ahmet.’

To disambiguate those meanings, beneficiaries can be expressed by postpositional phrases. Consider the following:

- (30) Bu evi **Ahmet için** yaptır-dım.
 Ahmet for
 ‘I had this house built for Ahmet.’

Sentences in which the beneficiary is indicated by a postpositional phrase are preferred to those where both the causee and the beneficiary are indicated by a dative-marked NP in order to make the meaning of the sentences clear (see also Comrie (1976, p.278) for the preferred version with a postpositional phrase).

On the other hand, when the causative suffix attaches to intransitive verbs as in (32), the person or thing that is made to perform the action denoted by the root verb has the accusative case as shown below.

- (31) a. Bütün atık su-lar-ı deniz-e **ak-ıt**-tılar.
 All waste water-PL-ACC sea-DAT flow-CAUS-PF-3PL
 ‘They *released* all the waste water into the sea.’
 b. Ali Hasan-ı **öl-dür**-dü.
 ACC die-CAUS-PAST
 ‘Ali *caused* Hasan to die.’ (Comrie, 1976, p.263)

Interestingly, causatives in Turkish like (27) and (31b) support the following causative description represented in Baker (1985):

(32) **Causative** (p.393)

- a. NP1(SBJ) V Ø ... -> NP3(SBJ) V NP1(OBJ)...
- b. NP1(SBJ) V NP2(OBJ) -> NP3(SBJ) V NP2(OBJ) NP1(OBL)...

In the example with the intransitive verb (e.g., *öl* 'die') like (31b), the subject *Hasan* (NP1) is realized as an accusative-marked NP, and a new NP3 (e.g., *Ali*) is formed as a subject in the causative sentence, following (32a). In the causative sentence (27), the subject NP1, *müdür*, is realized as a dative-marked NP, and a new NP3 (e.g., *Dişçi*) appears as a subject, supporting the causative description above (see also subsection 2.3 for the relevant discussion).

In fact, however, it is not easy to find any of the causative constructions with two indirect objects in Turkish, even though Comrie (1976) mentions the possibility of doubling on indirect objects.

4. Passive clauses

In Turkish, the passive suffix *-Il/(I)n* can be combined with both transitive and intransitive verbs. The process of passivization has the effect of making the direct object of a transitive verb the subject of a passive sentence as in (33b). The corresponding active sentence is shown in (33a).

- (33) a. Biz **ev-i** bu yıl artık sat-acağ-ız. (active)
 we house-ACC this year finally sell-FUT-1PL
 'We will finally sell the house this year.'
- b. **Ev** bu yıl artık sat-ıl-acak. (passive)
 house this year finally sell-PASS-FUT
 'The house will finally be sold this year.'

Note that *k* is replaced by *ğ* before a suffix beginning with a vowel. It is possible to express the agent in a passive clause, although one of the reasons for passivizing a direct object is to suppress the agent of an action. The agent is expressed either by using the agentive postposition

tarafından 'by', a locative or ablative NP or the adverbial suffix-CA ('by').¹³ In a *tarafından* phrase, the agent acts as the complement of the postposition.

In Turkish, agentless passive sentences are much more common than those involving a *tarafından* phrase. This fact can support Keenan & Dryer's (2007) definition that "basic passives lack an agent phrase" (p.339). As mentioned in Keenan & Dryer (2007), however, native speakers of Turkish often use passive sentences with agent phrases as in (34).

- (34) En iyi oyun **birincisınıf öğrencileri tarafından** hazırlanmış.
'The best play was performed *by the first year students.*'

A *tarafından* phrase usually comes immediately before the verb in a passive sentence. Phrases with *tarafından* can normally only refer to animate entities, usually to human beings. Occasionally they can be used to refer to machines (e.g., *makina tarafından* 'by the machine'). Another way of expressing the agent in a passive construction is by attaching the suffix -CA to the agentive NP.

- (35) Bu toplantı **okulumuz-ca** düzenle-n-di.
This meeting our school-ADV organize-PASS-PAST
'This meeting was organized *by our school.*'

On the other hand, when a passive suffix is attached to an intransitive verb, an impersonal passive construction is produced as in (36).

- (36) Adalara artık deniz otobüsüyle mi gid-**il**-ecek?
go-PASS-FUT
'Will hovercraft be the way that [people] go to the islands now?'

13) Consonant alternation in suffixes such as *ç/c* is shown by the use of the capital letter C. In particular, *ç* follows *p, t, k, f, h, ç, ş, s*, whereas *c* follows vowels and *b, d, c, v, l, m, n, j, r, z, y, ğ* (e.g., *posta-cı* 'postman', *süt-çü* 'milkman').

In such constructions there is no particular individual that is understood as performing the action denoted by the verb, hence such sentences cannot have agent phrases. In order to express a general property of a particular entity, impersonal passives occur often with aorist marking as in (37).¹⁴⁾

- (37) Arnavut kaldırım-ı üst-ün-de topuklu pabuç-la yürü-n-mez.
 Cobblestone.street-NC top-3SG.POSS-LOC high.heeled shoe-COM walk-PASS-NEG.AOR
 '[You] can't walk on cobblestone streets wearing high-heeled shoes.'

As mentioned earlier in subsection 2.3, more than one voice suffix in Turkish can attach to a verb because Turkish is an agglutinative language, and the order in which they are attached is very important because these suffixes affect the meaning of a clause. That is, the last suffix to appear determines the transitivity or intransitivity of the stem. This fact is closely related to Baker's (1985) Mirror Principle, which requires that "morphological derivations must directly reflect syntactic derivations (and vice versa)" (p.375). Consider the possible combinations of voice suffixes such as causatives and passives in Turkish.

- (38) *Causative+Passive*

Herkes-e birer ağaç dik-tir-il-di.
 everyone-DAT a tree plant-CAUS-PASS-PF
 a. 'It was arranged that a tree be planted for everyone.' (beneficiary)
 b. 'Everyone was made to plant a tree.' (causee)

- (39) *Causative+Causative+Passive*

Bütün öğrenci-ler-e resim-ler yap-tır-t-il-di.
 all student-PL-DAT picture-PL paint-CAUS-CAUS-PASS-PF
 a. 'All the students were made to paint (pictures).' (causee)
 b. 'It was arranged for pictures to be painted for every student.'
 (beneficiary)

14) Aorist (abbreviated as AOR) is a finite verb form marked by the suffix *-(A/I)r* (or its negative counterpart *-z*) in Turkish.

(40) *Reciprocal+Causative+Passive*

Onlar bura-da döv-üş-tür-ül-dü.
 they here-LOC beat-REC-CAUS-PASS-PF
 'They *were made* to fight *each other* here.'

As in (38), where there is just one causative suffix on the verb, a dative-marked NP is more often used to express a beneficiary (e.g., (38a)) than to express the causee (e.g., (38b)). By contrast, when a passive suffix is attached to a double causative as in (39), the more likely interpretation is the one in which the dative-marked NP expresses the causee (e.g., (39a)). The sequence such as reciprocal + causative + passive in (40) produces intransitive stems with a passive meaning. This phenomenon can support Baker's (1985) claim. In other words, the syntactic process associated with a passive suffix must occur after the syntactic processes associated with a reciprocal suffix and a causative suffix. As a result of the final syntactic process such as passivization, the verb (e.g., *döv* 'beat') becomes an intransitive verb.

5. Relative clauses

The most typical type of relative clause in Turkish is non-finite, and has one of the participle suffixes *-(y)An*, *-DIK*, or *-(y)AcAK*, which correspond to the relative pronouns 'who', 'which', 'that', 'whom', 'whose', etc. in English.¹⁵⁾ However, the range of finite relative clauses involving the complementizer *ki* is relatively very limited. All relative clauses other than *ki* clauses precede the NP they modify. Finite relative clauses with *ki* are discussed later. First, consider the following non-finite relative clauses:

15) Turkish has the following types of non-finite verb forms:

- (i) a. Verbal nouns (abbreviated as VN) are non-finite verbs of noun clauses.
- b. Participles (abbreviated as PART) are non-finite verbs of relative clauses.
- c. Converbs (abbreviated as CV) are non-finite verbs of adverbial clauses.

- (41) a. [**oyuncak-lar-ın-ı** **kır-an**] kız
 toy-PL-3SG.POSS-ACC break-PART girl
 ‘the girl who breaks/has broken her toys’
 b. [**hergünokul-da** **gör-düğ-üm**] kız
 every day school-LOC see-PART-1SG.POSS girl
 ‘the girl whom I see at school every day’

On the basis of the relationship between the head N and the relative clause, the participle suffix used in non-finite relative clauses is selected. Concerning the strategies of relativization, the participle suffixes of non-finite clauses can be attached as follows:

- (42) (i) Relativizing subjects
 [burada sat-ıl **an**] **kitap-lar**
 here sell-PASS-PART book-PL
 ‘the books [*which* are] sold here’
 (ii) Relativizing direct objects
 [bil-**diğ-im**] bir turizm şirketi.
 know-PART-1SG.POSS a tourism agency
 ‘a tourist agency [*that* I know]’
 (iii) Relativizing oblique objects
 [Turhan-ın et-i kes-**eceğ-i**] bıçak
 Turhan-GEN meat-ACC cut-PART-3SG.POSS knife
 ‘the knife [*with which* Turhan will/would cut the meat]’
 (iv) Relativizing possessors
 a. [araba-sı çal-ın-**an**] **komşu-muz**
 car-3SG.POSS steal-PASS-PART neighbor-1PL.POSS
 ‘our neighbor [*whose* car was stolen]’
 b. [usta-nın **kapı-sın-ı**değiştir-**eceğ-i**] çamaşır makinası
 engineer-GEN door-3SG.POSS-AC change-PART-3SG.POSS washing machine
 ‘the washing machine [*of which* the engineer is/was going to change the door]’

The examples above support the Accessibility Hierarchy proposed by

Keenan & Comrie (1977), which expresses the relative accessibility to relativization of NP positions in a clause as in (43).

- (43) **Accessibility Hierarchy** (p. 66)
 SU > DO > IO > OBL > GEN > OCOMP¹⁶⁾

The hierarchy indicates that if oblique objects can be relativized in a language, subjects and direct objects can also be relativized. Hence, the fact that genitives in Turkish relative clauses can be relativized shows that subjects, direct objects, and oblique objects can also be relativized.

Finite relative clauses with *ki* in Turkish have a very different strategy from non-finite relative clauses. That is, the relativized constituent precedes *ki* in finite relative clauses. The subordinator *ki* is used mostly to form non-restrictive relative clauses, but it may also be used in restrictive relative clauses. The usage of *ki* is somewhat limited in restrictive relative clauses, compared to non-restrictive ones. However, note that the typical usage of a relative clause with a participle suffix in Turkish is restrictive. I want to deal with *ki* in restrictive relative clauses only in this paper. In most cases, the head is the subject of the relative clause, and the verb of this clause is negative. Consider the following example (Kornfilt, 1997, p.60):

- (44) bir adam [**ki** çocuk-lar-ın-ı sev-me-z] yalnız yaşa-malı -dır
 a man **that** child-PL-3SG-ACC love-NEG-AOR alone live-NEG-EP.COP
 'A man who does not love his children must live alone.'

Unless the head is the subject of the main clause, a resumptive pronoun such as *ona* must be used as in (45).

- (45) Bir ahçı [**ki** baklava yap-may-ı bil-me-sin,] ben **on-a** ahçı de-me-m.
 a cook **that** baklava make-VN-ACC know-NEG-3SG.OPT I s/he-DATcook
 call [AOR.]NEG-1SG
 'A cook [*who* can't make baklava]! I don't call *that* a cook.'

16) OCOMP is an abbreviation for 'object of comparative' (e.g., *The boy who Bill is smarter is my brother*).

6. Conclusion

We have placed the main focus on syntactic structure as well as morphological structure such as suffixes that attach to verbs and nominals because Turkish is highly agglutinative in section 2. We have confirmed that many of Greenberg's (1963) universals listed for OV languages hold true for Turkish. In a nutshell, Turkish has an SOV order despite the variation in the ordering of constituents such as scrambling. The Head-Dependent Theory (HDT) states that Turkish belongs to head-final languages, where heads consistently follow their dependents. On the other hand, according to the Branching Direction Theory (BDT) proposed by Dryer (1992), this language is an example of a left-branching language, in which phrasal categories precede nonphrasal categories. Therefore, Turkish can be characterized as a V-final language with postpositions, a regular case-marking system, and modifier-head constructions (Erguvanli, 1984). In particular, the Turkish language shows double-marking patterns by Nichols's (1986) definition, as marking may occur both on the head and on the dependent simultaneously.

In addition, in sections 3-5 we have discussed the syntactic structure of causative, passive, and relative constructions in Turkish. As for Turkish causative constructions, we have confirmed that they support the causative description, represented in Baker (1985). Moreover, Turkish has agglutinative morphology, and Baker's (1985) claim requires that syntactic processes occur in the same order as their corresponding morphological processes. Therefore, by discussing the possible combinations of voice affixes such as causatives and passives, we can understand that Baker's (1985) Mirror Principle is applicable to Turkish data. Finally, we have examined that in Turkish relative clauses, subjects, direct objects, oblique objects, and possessors can be relativized. This fact can support the Accessibility Hierarchy proposed by Keenan & Comrie (1977), which states that if anything can be relativized in a language, subjects can be relativized as well.

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